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We will be happy to see you as an author in the journal!

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### Regionology of the Arctic and North: Management, Economy, Sozium, Culture

**UDK 315** 

# МЕЖДИСЦИПЛИНАРНЫЕ ЭКСПЕДИЦИИ — ЭФФЕКТИВНЫЙ СПОСОБ ФОРМИРОВАНИЯ КОМАНД ДЛЯ РЕАЛИЗАЦИИ КОМПЛЕКСНЫХ ИННОВАЦИОННЫХ И ИНВЕСТИЦИОННЫХ ПРОЕКТОВ<sup>1</sup>

#### INTERDISCIPLINARY EXPEDITIONS-AN EFFECTIVE WAY TO FORM FOR IMPLEMENTATION COM-PLEX INNOVATIVE AND INVESTMENT PROJECT



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**Аннотация.** В статье представлены итоговые результаты междисциплинарных экспедиций студентов, аспирантов и преподавателей четырех университетов г. Красноярска в поселки локального проживания малочисленных народов Севера Красноярского края

**Ключевые слова:** коренные малочисленные народы, междисциплинарные экспедиции, студенты, аспиранты, преподаватели

**Abstract.** In the given article we represent our final results of the inter-disciplinary expeditions of the students, post-graduate students and tutors of the 4 universities of Krasnoyarsk to the villages and localities, inhabited by the indigenous minorities of the North of the Krasnoyarsk Region.

**Keywords:** indigenous minorities, interdisciplinary expeditions, students, post-graduate students and tutors.

In 2010-2012, Siberian Federal University became the owner of the grants of the the federal target program (FTP) "Scientific and scientific-pedagogical personnel of the innovative Russia", grant of the Krasnoyarsk Regional Science Foundation (KKFN) [1-5]. The main purpose of the grant was to conduct interdisciplinary research complex onthe level of quality of life of small indigenous people of the north of the Krasnoyarsk Territory, the preservation of their traditional activities and national culture in the face of the global transformation, the development of a modern model of the northern settlement in the areas where indigenous people engaged in the traditional crafts.

To achive this goal were named several tasks:

- a) Investigate the features of construction and arrangement of housing.
- b) To carry out architectural and planning field research communities.
- c) To develop the architectural and planning model of the modern northern village.
- d) To develop a model of heat and power to the northern towns.
- e) To consider for the modernization of health care in the Far North.
- f) To develop a generalized model of innovation and production, aimed at food selfsufficiency villages, deep processing of local agricultural raw materials, the development traditional handicrafts and tourism, etc.

For this study were formed interdisciplinary expeditions, the composition of which were included undergraduate and graduate students and three teachers of universities in Krasnoyarsk, namely the Siberian Federal University (SFU), Krasnoyarsk State Agricultural University (KGAU) and Krasnoyarsk State Medical University (KSMU). The expedition was attended by the cultural studies, art historians, architects, builders, engineers, physicists, farmers and managers.

Expeditions were sent to the northern towns of the Krasnoyarsk Territory - Local places where indigenous people were engaged in the traditional activities: hunting, herding, fishing and gathering wild plants, etc. These four villages of three municipalities in the north of the Krasnoyarsk Territory.

The settlement Surinda [6] Evenk municipal district (MP) is the local Evenki living in the taiga zone (480 pers.). The main type of occupation – are reindeer breeding in the MP OPH "Surindinsky" and hunting.

Essene settlement [7] Evenk MP is a local residence segregated ethnic community - Essene Yakuts (620 pers.). It is located above the Arctic Circle to the shores of the largest lake in the Krasnoyarsk Territory in the forest-tundra zone. Main type of activity of the population - are the fishing and hunting.

Nosock village [8] Taimyr Dolgan-Nenets MP located at the mouth of the Yenisei River in the Arctic Circle in the tundra zone. Its population is (as of 01.01.2011) 1800 people of which 1500 - Nenets. The nomadic ways of life are 1,107 people (232 families). Main type of activity of the population – are herding and fishing.

The settlement Farkovo [9] MR Turuhanskogo Krasnoyarsk Territory – is the only place in the province of the local residence Selkups (410 pers). Main types of activity of the population – are fishing and hunting.

Pic. 1 shows photographs of the members of the interdisciplinary expeditions (FAS representatives, KSMU KGAU) in the northern towns of the Krasnoyarsk Territory.





б

Pic. 1. Interdisciplinary expeditions undergraduate and graduate students of the Siberian Federal University (SFU), Krasnoyarsk State Medical University (KMGU) and Krasnoyarsk State Agricultural Universities University (KGAU): a - a claim that was the Tour village. Surinda and settlement. Essey Evenk a municipal district \*, b - in the village. Nosok and settlement. Guard Taimyr Dolgan-Nenets Municipal District of Krasnoyarsk Territory\*\*.

- \* From left to right: S. Gladkiy (SFU graduate student, architect), K. and B. Fissenko Lohaykin (5-year SFU students, architects), A. Cherepanov (SFU graduate student, engineer and physicist), L. Fatkulina (5th year student of SFU, a civil engineer), A. Kopitsa (dentist, graduate of SFU), A. and M. Radova Kolesnik (5th year student of SFU, culture). Bottom row: V. Soviets, S. Soroka (5-year SFU students, civil engineers).
- \*\*From left to right: L.Fatkulina (5th year student of SFU, a civil engineer), and M.Yamkin Yaptunay Celi (fishermen village. Sock, Nenets), VI Kirko (Professor SFU), VV Zakharyuta (SFU graduate student, a civil engineer), I. Kugappi (5th year student of SFU, cultural), K. Reznikov (SFU graduate student, cultural); wenge WH (Deputy Head of the Administration of the rural settlement Sentry).

The expeditions in their work used several methods:

- a) Survey and in-depth interview residents of settlements, township heads of administrations, experts in education, health care, preservation of national culture, architecture (arrangement) of settlements, construction of the new and old housing.
- b) To design workshops on the development of theindustrial activities in the field of deep processing of the local agricultural raw materials and new mini-production for self-sufficiency settlements adequate food and clean water.
- c) Visual inspection of buildings and structures, state of the energy sector and infrastructure projects such as roads, sewer and burial.

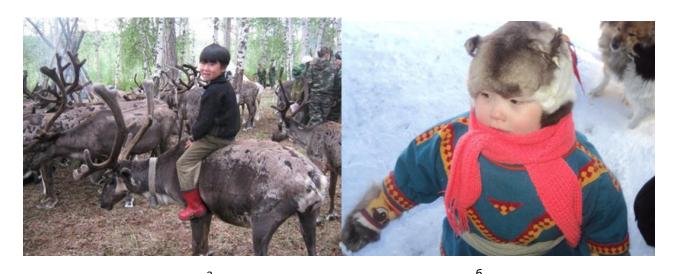


Pic. 2. In-depth interviews with nomad herders in the brigade MP OPH "Surindinsky", 2010 (a); Village residents fill out the questionnaire. Nosok at the project seminar, 2011 (b)

The main results were published in the ethno-cultural collective monograph [10] and in [11-15]. Ethno-cultural studies have shown major problems:

a) Education and the availability of the modern high-quality education according to the national circumstances of the life and culture of the indigenous people (settled in remote villages and / or nomadic herding in teams).

- b) The preservation of language and national ethno identity.
- c) Close relationship to preserve the culture of indigenous people from their tradtional way of the life and the traditional crafts.



Pic. 3. Future foreman reindeer brigades Borka (a) settlement. Surinda Evenki MR; future hunter or fisherman village. Nosok Taimyr Dolgan-Nenets MP (b)

In [11, 16] as one of the measures to address the problems of the proposed establishment of the Higher School of the northern Siberian Federal University, the main task of which is expected to increase knowledge of the children of the indigenous people to the level comparable to the level of knowledge of the urban schools children for the subsequent delivery of the unified state examination for the admission to the universities of Russia.

The results of evaluation of buildings and structures of the settlements of the North of the Krasnoyarsk Territory published in [17-18]. Studies have shown currently existing high degree of contrast in the possibility of their use: from the emergency state (Fig. 4a) to the modern highest requirements (Pic. 5). Some objects do not meet the simple requirements to housing (Pic. 4b).



Pic. 4. Some residential group (a) in the village. Essey (Evenki MP) in the village. Sock (Taimyr, Dolgan-Nenets MR) (b)



Pic. 5. Kindergarten in the village. Essey that meets the highest standards of the construction and performance

The results of the evaluation of the thermal power complex and possible solutions to reduce the cost of electricity by the example of the village. Sock and settlement. Essey published in [19]. To generate electricity in the villages are mostly used diesel power, the wear which reaches 80-100%. Despite this, in the Evenki MR equipment DES (Fig. 6) is contained in a perfect condition (Head MP EMR "Ilimpiyskie power" N. A. Supryaga.



Pic. 6. Diesel power in the village. Essene (a) and the village chief electrician A. N. Maymaga (b) (Evenki MP)

Price per kWh in the villages of the northern Krasnoyarsk region ranges from 20 to 30 rubles. In this regard, for the further development of their productive competitiveness is an issue to reduce the cost of thermal power generation. In [19] as an the example of the village Nosock and settlement Essey shows the possibility of reducing the cost of electricity is 2-3 times through the use of a combined version of the diesel and wind power plants.

As noted above, in the villages of the northern territories of Krasnoyarsk villages, the traditional activities, such as reindeer herding, hunting, fishing, gathering, etc. This is the basis of their existence [20-21]. However, there are problems that do not allow full use of the resource potential of the North. These challenges are, first of all, the cost of electricity, clean water, deep processing of the products of nature (meat, fish, hides, wild plants, etc.), transportation and sales.

In [22], a locally based production model remote village. The model involves the creation of the settlements in the mini-productions of two types: production, aimed at self town's products for their own consumption (processing of milk, meat, and fish); productions aimed at the production of products with high added value. Pic 7 shows photographs of the high-tech mini-production of deep processing of reindeer antlers in the village Surinda. The author of the project - Professor, Doctor of Agricultural Sciences V. Nevzorov (Krasnoyarsk State Agricultural University).



Pic. 7. Objects of high-tech mini-production of deep processing antlers of reindeer in the village. Surinda

The main feature of these plants is that the design and installation of the equipment is in a container, certification of production and training takes place in Krasnoyarsk. The village is made with site preparation summing electricity and water. Shipping is on water or thoroughfares, or by winter road.

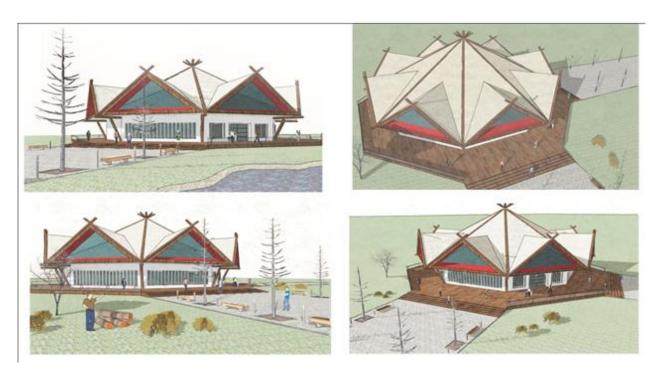
The students and graduate students of the Institute of Civil Engineering and the Institute of Architecture and Design SFU (for example, pos. Essey Evenk MP) developed variants of planning architectural designs in locally villages located in remote tundra and forest-tundra zones [17, 18, 23, 24]. In the development of the architectural models take into account the ethnic and cultural landscape and geographical features, the modern conception of the ecological preservation of the environment, economy of heat and electricity. Pic 8 shows the traditional national architectural forms of the northern towns - chum (a) and Hal (b).



a b S Traditional architectural forms of housing in the northern settlements: a -

Pic 8. Traditional architectural forms of housing in the northern settlements: a - tent (village Sock) and b - Hal (village Essey, Evenkiya, Krasnoyarsk region, pos. Hodorgoy, Yakutia)

Pic. 9. Architectural forms, projected on the basis of use of the composition tent - Hal basic properties of the composition tent - Hal, is offered in 23, 24], which forms a cone-shaped structure like a tent, and multi-faceted as Hal. In addition, the proposed basic principles of the spatial urbanization in the case of the design of the new northern towns.



So, in this paper we show that a form of interdisciplinary expeditions of the students and teachers from various universities allows you to have:

- a) A comprehensive approach to the problem of locally situated towns, including places where indigenous people.
- b) Propose solutions interrelated problems with the ethno-cultural characteristics and traditions.
- c) Effectively prepare students for creative work in a team on the real objects.

While working on the project three teachers were protected and prepared a master's thesis, masters were protected five master's theses, students are protected eight theses and projects.

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## АРКТИЧЕСКИЕ ПРОЕКТЫ МЕЖРЕГИОНАЛЬНОЙ ИНТЕГРАЦИИ THE ARCTIC PROJECTS OF THE INTERREGIONAL INTEGRATION



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гиональной интеграции в Российской Арктике на примере Совета Белого моря и проектируемого Арктического союза регионов России

Ключевые слова: Российская Арктика, Белое Keywords: Russian Arctic, the White Sea, inteморе, интеграция, регионы, проекты, Арк- gration, the regions, the projects, Arctic Council тический союз

Аннотация. Исследуются проблемы межре- Abstract. The problems of the interregional integration in the Russian Arctic, as the example of the White Sea and the planned Arctic union of the regions of Russia

#### Introduction

The purpose of this paper is to analyze the problems of inter-regional integration of the Russian Arctic on the basis of the study of the needs of such convergence at the level of the Russian state, and at the level of the Arctic regions themselves. Put the problem to consider developing in the present situation, analyze the development strategy of the Russian Arctic and other documents, to compile existing practical experience in the developing of the White Sea at the end of XX - beginning of XXI century. To identify challenges to the Arctic of the modern Russia and to give a general description of the project of the Arctic regions of Union Russia. Used as scientific methods (analysis, synthesis), and the methods of the special sciences - history, regional studies, geopolitics, public administration, conflict.

In terms of the methodology, it is important to conceptually define the object of the study, as in the publications on the Arctic issues often use different definitions of cloud over the content and scope of the Arctic area, constantly bring grist to the mill of its internationalization until the transfer of territory under international administration and the waters of the Russian Arctic, including The Northern Sea Route. Scientific myth-making is, for example, the introduction to the scientific use of the concept "North- Arctic Region". North and the Arctic - two different major international regions, located in six countries in the world, not just in Russia alone. To combine the two transnational regions - the Arctic and the North - one of the North- Arctic region, it is necessary to justify conceptually in this case, the concept of this general region, its integrity, and features that distinguish from other areas. Such scientific evidence so far does not appear in publications, although NArFU named after M.V. Lomonosov, such as annual conferences, where the object of the studies indicated not as Russian Arctic, not the Arctic region, namely a mythical North Arctic region.

Who benefits from such a "scientific" myth-making with the transformation of the Russian Arctic in the Northern Arctic region? Clearly a superficial approach to the definition of an object of the scientific study reduces the image of the university, designed to become one of the leaders in the study area in the Russian Arctic. The Arctic is becoming an arena of struggle, not only for the space of hydrocarbon resources, transport communications, but also for the national status of the region, the content of the various concepts in science, for the effective use of soft power. Therefore, the semantic transformation of the Russian Arctic in the C-AR does not seem so harmless thing to protect the sovereignty and the national interests of Russia. The Arctic Council gives priority to the eight circumpolar countries, limiting even the composition of the observers. By itself, the North Arctic region appears with a gray zone, faceless entity with unknown status. Great for the redistribution of the Arctic polar territory and waters almost been completed, and takes in the XXI century with the use of other forms of soft power. C-AR can not be identified even with the Arctic G-20 as a product of a multi-polar world.

In the official documents of the Russian Arctic and the North are used separately on their own and is not positioned one region. In scientific publications in content stand out, in addition, the European Arctic, Polar Urals, West Siberian Arctic, Far North, the European North of Russia and other names [1, p. 8, 64, 241].

In the domestic jurisprudence of the Russian Arctic is seen as a modern large-scale object of the international law in the legal analytical comparison of this concept with the sector polar domains of the USSR and the Russian Arctic, clearly defines the spatial limits of the Russian Arctic, the outer limits of its legitimate [2, p. 6-9, 12-15].

The object of the study in this article is the Russian Arctic, identified as the Arctic zone of the Russian Federation, which according to published bathrooms Russian Ministry of Regional Development 23 January 2013 a draft Federal Law "On the Arctic zone of the Russian Federation" in-

cludes all or part of the territory and waters of the nine subjects of the Russian Federation [3]. Specified on the author's map of the Russian Arctic (Pic. 1), they are discussed in this article as an Internal Arctic regions, among which in varying degrees of convergence processes occur, education mutual horizontal linkages in the economy, culture, management and policy in the social sphere.

#### The map of the Russian Arctic (AZRF)



Pic.1. The map of the Russian Arctic / ©Lukin. Y. F., Eremin A. E. - Arkhangelsk, 2011

The draft federal law in 2013 on the Arctic zone of the Russian Federation postponed. Together with its Russian Regional Development Ministry to urgently develop the disposal of the President of the Russian Federation "On the composition of the land areas of the Arctic zone of the Russian Federation". With this formulation, it is logical to raise questions about whether it includes the waters of the Russian Arctic. Will be this factor taken into account in this thalassocracy, Russian naval power? Where will the be the water area of the Northern Sea Route?

#### Do the state need AZRF, as a sinle union object or a management subject?

In the study of the processes of the integration of the Arctic regions - the subjects of the Russian Federation, members of the Russian Arctic, in addition to a clear definition of the interaction of objects, as well as the subject of the integration approach is a problem there is a requirement in such a convergence of the state and the regions themselves. It is to be expected and obvi-

ous answer to the question: «Does today the State Russian Arctic zone, as a single object and the subject of the management and policy, economic, social and cultural interaction, doesn't it?" The existing today the vast space of the Russian Arctic, the internal boundaries of which are still not even legally defined, it is obvious there is no use. The Northern Sea Route (NSR) as the single national transport highway<sup>2</sup>, on which there is a huge potential demand. As a strategic reserve needs and continental shelf of the Arctic with his alleged, but has not yet been fully confirmed hydrocarbon reserves<sup>3</sup>.

Russian Arctic zone as a single object and the subject of the management at the state level today is more a virtual concept. All the subjects of the Russian Arctic live by themselves, showing minimal interest to each other. The state "long harnesses" solve problems in the Arctic basically on top, gradually as their budgetary possibilities involving business. This is a general cleaning of the islands and coastal areas, the beginning of the construction of a new generation of the nuclear-powered icebreakers, the sea port of Sabetta, 10 rescue centers Emergencies<sup>4</sup>, 20 new outposts<sup>5</sup>, the adoption of the federal law - FZ-Nº 132 and the creation of SMP administration, updaing infrastructure project of Russia in the Pechora Sea - Prirazlomnaja, exploration and drilling in the Arctic shelf with the help of the foreign companies, and other steps.

The problem today is whether Russia has the time and resources to start not just Putins breakthrough to the Arctic, about which I wrote earlier, and the real, powerful offensive in the Arctic to a significant improvement in the situation and the full use of pop-up windows in the XXI century opportunities all Arctic regions of Russia. Obviously, there is not. And in the terms of rolling the economy into recession and budget cuts for 2014-2016 years. On the some Arctic projects, including large-scale project such as the "program of the exploration of the continental shelf of Russia and the development of the mineral resources in the long term, up to 2030" can already do not remember, the Government of the Russian Federation this summer just closed the program offshore production<sup>6</sup>.

The direction of the main blow in the public policy Russia is now almost certain East, Asia, but not the Arctic. A business profitable development of hydrocarbon deposits on land (Yamal, Si-

<sup>&</sup>lt;sup>2</sup> Федеральный закон Ф3-№132 «О внесении изменений в отдельные законодательные акты Российской Федерации в части государственного регулирования торгового мореплавания в акватории Северного морского пути» действует с 2013 года, создана администрация СМП в Москве, офис в Архангельске.

<sup>&</sup>lt;sup>3</sup> В данной статье я не касаюсь вопросов обеспечения безопасности и укрепления обороноспособности России.

 $<sup>^4</sup>$  Пока в 2013 г. введен в эксплуатацию только один в г. Нарьян-Мар Ненецкого автономного округа.

<sup>&</sup>lt;sup>5</sup> Открытая информация по обустройству госграницы в Арктике отсутствует. Вполне вероятно, что принятая ФЦП в отношении Российской Арктики в установленные сроки и в полном объёме не будет выполнена.

<sup>&</sup>lt;sup>6</sup> Совещание о перспективах развития отечественного гражданского судостроения. 30 августа 2013 г., Владивосток. URL: http://президент.рф/новости/19107 (дата обоащения: 02.09.2013).

beria), which is logical and reasonable, and not on the Arctic shelf, with its environmental and investment issues. Approved by Vladimir Putin's strategy of the development of the Russian Arctic and the national security for the period up to  $2020^7$  as the six priority areas of the development of the Russian Arctic and the national security highlights: 1) a comprehensive socio-economic development of the Russian Arctic; 2) the development of the science and technology; 3) the creation of a modern information and telecommunication infrastructure; 4) environmental security; 5) international cooperation in the Arctic; 6) military security, defense and protection of the state border of the Russian Federation in the Arctic [4]. If you remove the concept of the «Arctic», then such common tasks can be placed before any other macro-regions, federal district and throughout Russia. No clear sound concrete priorities for the near term, which may not be much in the specified time range up to 2020, taking into account the investment, fiscal, technological, and other constraints. Existing problems of the improving governance and the social and economic development of the Russian Arctic disclosed in claim 9 in fairly general terms. On the management of the common phrases referred to in other paragraphs strategy. It would be more logical from the standpoint of the management to highlight issues of the state, regional and municipal management, delegation of authority, definitions of the roles and responsibilities as one of the main priorities of the Russian Arctic. The Russian experience shows that the main problem of the public administration is not lack of understanding of what to do, and knowing how to organize how to do, to achieve positive results in the practical real life, not on paper in their offices. Russian President meeting with government ministers, meeting in the subjects of the Russian Federation on quality execution of the decrees of May 2012 on the socio-economic development of the country clearly reveals the existing in the federal government and the management of the formal bureaucratic practices of the past decisions. And the Arctic is not a pleasant exception.

Comparative analysis shows that the U.S. national strategy for the Arctic region of 10 May 2013 establishes the most common strategic priorities for the U.S. Government in the Arctic. In this respect, it differs little from the Russian. But the U.S. strategy to some extent is aimed at more effective management, new opportunities associated with a significant increase in activity in the Arctic. The U.S. strategy builds on existing initiatives of the federal, state, local authorities, the private sector and international partners. Seeks to focus the priority efforts where there are opportunities and necessary action: national security, the Arctic infrastructure, raising awareness of the changes taking place in the Arctic. The key elements of the national security needs of energy are

 $<sup>^{7}</sup>$  Опубликована 20.02.2013 на сайте правительства РФ. URL: http://www.government.ru/docs/22846/ (дата обращения: 22.02.2013).

determined by the United States, the active resource conservation, responsible risk assessment. The task of the creating patterns and mapping of the ocean, waterways, which could not be seen because of the multi-year ice. Much is said about the partnership and interaction of the indignous among the Arctic states [5].

Returning to Russia, you can say with regret that the Arctic zone of the Russian Federation today is not a single entity in any of the spheres of Russian society. Deep inter-regional integration in the Russian Arctic is almost not developed due to the high level of spatial information and communication, socio-economic fragmentation regions - the subjects of the Russian Arctic. In adition, there are also subjective reasons, the manifestations of the regionalism in the practice of management, lack of initiative from below while waiting for the instructions from above.

#### The Council of the White Sea

Let us ask another question: "Do we have today integration, unification of the efforts at the level of the RF subjects tin the Arctic"? You can refer to the practical-experience that has been received by us in the process of building of the White Sea and other projects. The relevance of the inter-regional integration in the White Sea is due to common conditions of the population living here, raw material export-oriented economy, climatic factors and a common historical destiny. The Northern territory until 1918 partly or wholly included in the Arkhangelsk region in 1929-1936. - Northern Territory. In XX - beginning of XXI century, historically common socio-cultural and economic space of the broken in the administrative-territorial boundaries of different Russian regions.

Currently, White Sea is an inland sea unites Russia and territories of the Arkhangelsk and Murmansk regions, the Republic of Karelia and Nenets Autonomous District. They have not only a common history, but the same problems in the economic and social development, culture, the formation of the infrastructure and in other spheres of life. This is the basis for inter-regional coperation, which is necessary today to develop. Geopolitical same paradox here is that if there are no identical problems in the constant contact, partnership and dialogue, as if northerners live on the shores of the White Sea is not in Russia, but in general in the different countries. The level of the horizontal cross-regional integration in the White Sea is even lower than in the Barents Euro - Arctic Region (Ministry of Foreign Affairs of Norway project).

So back in 1997, made the first steps to establish inter-regional association in the framwork of the White Sea (GMS). Participants IX Solovetsky Forum appealed to the leadership of the sujects of the European North of Russia, political and social organizations, citizens of the White Sea to the proposal to consider and support the idea of establishing inter-GMS, the development and

implmentation of inter-regional target program (CIP) of the optimal use of the potential White Sea and the coastal areas in the interests of the sustainable economic growth with environmental safety of the population. The constituent areas such CIP are joint efforts of the government and business in the coordination and implementation of a common energy policy, sustainable maintnance of the population, economic entities in fuels and energy, placement and construction of roads, railways, terminals, pipelines, and the introduction of new means of communication, the formation of a unified infrastructure that meets the world-class standards, regulate hunting proucts, fishing, joint activities on the ecology of the White Sea, the security in all spheres of the human activity, the development of education, science and culture; confidence-building and the international cooperation in the Northern Europe [6].

This appeal Solovetsky Forum was supported Prime Minister of the Republic of Karelia Stepanova, Murmansk Governor Yuri Evdokimov, and Minister of Regional Policy of the Russian Federation Vladimir Kirpichnikova. Working Group in Arkhangelsk under the leadership of Isakov was active in 1998-1999 on the legal provision of GMS. We have developed two projects: the Charter of the Interregional Association "Council of the White Sea" and the Charter of noncommercial partnership "Council of the White Sea". In December 1998, the head of the administration Efremov took in Arkhangelsk Prime Minister of the Republic of Karelia Sergey Katanandov, Head of Administration of the Murmansk region Yuri Evdokimov and the Nenets Autonomous District Butovo, but then the sign of any documents failed.

Questions about the creation of the White Sea and the main directions of his work have been discussed later, March 5, 1999 at a meeting of the representatives of the Arkhangelsk and Murmansk regions, the Republic of Karelia and the Nenets Autonomous Area [7]. The action plan of the GMS were included proposals for the construction of river-sea vessel for the carriage of passengers and tourists to Solovki and White Sea coast; edition of the monuments of the history and culture, nature, science, and technology of the coastal areas of the White Sea, White Sea carRying members of Congress the White Sea to the creation of the basis of the Solovetsky Musum of inter-regional Centre for the Study of the environmental and biological, historical and cultural potential of the White sea, bringing together regions for the seal hunting, the creation of its publication, etc. Most of the proposed left then just wishful thinking. Say what is formally the head of administration did not sign any document on the establishment of the GMS, and representtives of the four subjects of the Russian North in March 1999 did not have such authority.

28-30 October 1999 in the city of Arkhangelsk, the first of the Dvina-White Sea ecological forum «Inter-regional cooperation in the Russian North". October 29, 1999 unanimously adopted

the Declaration on inter-regional cooperation between the Republics of Karelia and Komi, Arkhagelsk, Vologda and Murmansk regions, Nenets Autonomous District. Revised documents and their legal expertise in Murmansk, Petrozavodsk and Naryan-Mar was sent Agreement on interrgional cooperation in the White Sea basin between the Republic of Karelia, Arkhangelsk and Mumansk regions, Nenets Autonomous District and the Regulation on the Board of the White Sea. Responses were received then only from Murmansk and Petrozavodsk. There was no response from the administration of the Nenets Autonomous Okrug. Quite restrained, if not passively acted Arkhangelsk regional administration.

The development of the partnerships between the subjects of the Russian Federation in the North of Russia to develop joint task of the interregional cooperation "White Sea" for 2000-2005. The implementation of other steps - all of it got real progress, but instead found a permnent situation of the conflict in the inter-regional relations. All attempts by NGOs to create at least consulting and coordinating-regulating structure on the shore of the White Sea with the admiistration of the subjects of the Russian Federation did not bring the expected results. And the reason most banal was the fact that the regional power elites having their own interests, ambtions and commitment to regionalism is not the best in its manifestation. Very negatively affected reluctance of the Arkhangelsk region to take full function of the leadership to coordinate all of this work without instructions from above. Themselves as non-profit associations did not have the time necessary organizational and financial resources to such activities. In fact it was the creation of an innovative public-private partnership in some form or another. It can be said; in this case, non-governmental organizations in Arkhangelsk, ahead of time, conducted a social experiment revealed a conflict of the interest, lack of readiness of the regional power elites of the subjects of the Russian Federation, located in the basin of the White Sea, and inter-regional integration, not in words but in deeds.

In this situation, the social movements have made another attempt to start a movement to cooperation at the municipal level. The administration of the municipality "Maritime area" 6 Setember 2001 hosted the first White Sea Symposium "The municipal authority, self-management in the socio-cultural environment of the northern territories", which discussed the report on the socio-economic and cultural development of the Primorsky district, the Local Government in the Arkhangelsk region, of inter-regional integration. Once again, it was noted that the White Sea-is a unique inland sea the only Russian. The northern people are the historical destiny. And the prolems they have are the same: a low standard of living, transport, environmental issues (in the White Sea, for example, a huge dumping of chemical weapons), quotas, fishing, and ways of solv-

ing the social and economic problems. Therefore, the question was raised about the creation of the Council of the municipalities of the White Sea. The Northern community needs mutual suport, collective solutions to many social problems. It did not happen from the top, can get the uion from the bottom, at the municipal level of the White Sea, so we thought at the time. It was decied to establish a committee, to finalize the documents of the symposium, to send them to all the heads of the municipalities on the coast of the White Sea, gets their comments and suggestions, and then assemble in Onega order to create a Council of the heads of the municipal formations of the White Sea (Council of the White Sea).

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However, in the municipalities located on the coast of the White Sea, the current need for the integration of the efforts in the solving social projects limited by lack of adequate financial rsources, expertise, creativity. Social initiative of community groups on the interregional coopertion of the municipalities in the White Sea area remained at the time the voice of one cring in the wilderness. Understanding the futility of large-scale social projects without external suport of the state and the subjects of the Russian Arctic has led us to the creation of the another informal organization-is the Arkhangelsk regional advisory council for the local government (LG ARES) to provide information, research, design and expert support to the initiatives of the municipalities

and provincial government authorities (CBT). Developed other projects of the interregional integration.

#### The project of the Arctic Union of the regions of Russia

The most significant project in 2010-2013 began work on the creation of the Arctic regions of the Russian Union (ASRR). In the developed state if the CAS program "Economic and social dvelopment of the Arctic zone of the Russian Federation for 2011-2020", one of the ten strategic priorities of the state policy in the Arctic has been identified improvements in the governance of the socio-economic development of the Russian Arctic.

Relevance and rationale of the project "The Arctic regions of Russia Union" was defined as a federal project "Strategy for the Development of the Arctic zone of the Russian Federation and national security for the period up to 2020", published by Ministry of Regional Development of Russia in 2010 [8]. This paper was aimed at creating a single block of the Arctic System Managment for the estimated risks. Been an acute need for the inter-regional economic, social, political coordination Russian Arctic territories, the project emphasized the need to create a "vitual" Arctic federal district and inter-regional association of the interaction "Arctic agreement" in the name of the smoothing contrasts development within the Arctic zone and the establishment of the effective flows of knowledge and personnel between old - and "young-industrial" Arctic teritories. Designed active introduction of the remote control; neutralization costs of the single-industry specialization Arctic settlements, the use of the international best practice management, organization of the internal interaction between government, business, the institutions of the ntional self-indigenous people and non-profit organizations in the name of revival of the local intiatives remote Arctic communities [8].

In view of the above documents to the beginning of December 2010 there was a first draft, called "The Arctic regions of Russia Union" ("Arctic union regions of Russia", abbreviated ASRR). In terms of the methodology, the basis of the project is multi-disciplinary, systems approach, consiering the Arctic space in the different dimensions regionology. The main objective of the project in the first phase is to create a "union of the Arctic regions of Russia" for the following tasks:

- a) The promotion of the dialogue, mutual trust and understanding between people, iformation interaction regions and municipalities of the Russian Arctic using IT.
- b) The organization of interregional coordination, cooperation and integration of the economic, social, political and cultural activities of the regions of the Russian Arctic.
- c) Benchmarking is the use of the best positive experience of the priarctic management areas.

d) The establishment of the effective communication enhances openness and accessibility of the ethnic and cultural heritage of the indigenous people.

The road map proposed for implementation in 2011-2020 more than 40 events, painted over the years. Indicated the expected results. In order to implement the planned actions is counted sum of 34.3 million rubles to 10 years. The city of Arkhangelsk in the successful implementation of the planned project is an informal, electronic capital of the region of the Russian Arctic, the Arctic create motor regions of the Russian Union. Creation of a "virtual" Arctic Federal District (state-NGO) based on the initial implementation of the project "The Arctic regions of the Russian Union" includes a number of the measures have already been implemented to date (since 2011, for example, publishes an electronic scientific journal "Arctic and North"), and at the same time eliminating IUiR in 2012 and the center "Arctic partnership" in 2013, which were basic to the implementation of the planned activities.

#### Priorities for the regional integration on the project ASSR

Among the top factors contributing to the inter-regional integration within the framework of the proposed project ASRR conceptually possible to note the following.

First, this communication. The use of TV, radio, modern IT-based e, creative ideas can dvelop direct contacts, business relationships between organizations, businesses and individuals in all the spheres of the life of the Arctic societies. Share information, documentation, work experence, to promote the establishment of inter bank information and databases; cooperate on the basis of direct links between administrations, the regional governments and the economic etities, regardless of their form of ownership and subordination. The development of the dalogue, mutual trust and understanding by carrying out the inter-regional meetings, business meetings, seminars and conferences. In the long term, the formation of the television company "Russian Arctic", several electronic networking sites with a focus on the Arctic regions of Russia, the creation of Arkhangelsk information portal "Electronic government entities of the Russian Arctic", Implementation of the first Congress of Municipalities of the Russian Arctic , as well as other activities .

Second, the Arctic management. Creation of a separate Ministry for the Arctic seems to me very problematic, as functionally the development of all the constituents, their budget support, investment projects under the federal programs are solved in the manner prescribed by the laws of the relevant structures of power and control. Another thing, for example, the creation of ASRR, the Administration of the Northern Sea Route, and similar bodies of the public administration in

the Arctic. It would be the establishment of the office of the Arctic projects in the autonomous non-profit organization "The Agency's strategic initiatives to promote new projects" (URL: http://www.asi.ru/about\_agency/). It is also possible the functioning of this office in the structure of NArFU named after M. V. Lomonosov as one of the steps to create a union of the Arctic regions of Russia in the western part of the Russian Arctic and the same office in the Siberian Federal University of the East Siberian Arctic. Such ASRR project offices could perform the Arctic monitoring of the economic, social, geopolitical, ethnic and cultural situation in the Arctic. Within ASRR may be the provision of the Arctic stakeholders consulting, education, information, design and other services related to the Arctic and the North, both on the basis of the grants, and through other funding sources.

As a result, the second stage is the actual creation of a "virtual" Arctic Federal District as a public partnership with the interests of all life in the Arctic, to meet the needs of the different social groups in the information, knowledge, communication, social and cultural interaction and etno-cultural self-determination. Introduced new concepts of the "municipal-public partnership", "public partnership" (state-NGO) is undoubtedly in need of the legal reasoning and legislative dsign similar to the "public-private partnership". The interaction of the government agencies, civil society and business in the implementation of the projects of the Arctic is becoming a major pardigm in the activities ASRR. This approach is relevant not only for the Arctic.

Thirdly, culture. Actual promotion of the humanitarian projects in the field of the culture, including science, education, traditional culture of indigenous people. Since 2012, the center "Artic Partnership" NArFU with partners in the Nenets Autonomous Okrug (M.Chuprov) began to implement a cultural project that has huge potential unification. This refers to the carrying out of the total for the arctic regions of the celebration of the Day of cold on the last day of February. General cultural activities in the general have a significant positive potential. Cultural, scientific and educational projects are now even more likely to integrate the Arctic regions than the industry, not to mention the permanent conflict with the implementation of the hydrocarbon projects.

However, unlike oil and gas in the Arctic, the humanitarian problems of the Arctic regions are a priori as would be less relevant. This situation fully reflects the trends and the crisis of the liberal education in the general and the science in Russia, strengthened with the arrival of the new techno-bureaucratic command to the management. It should be noted that the humanities research in the Arctic and the North of Russia is going through difficult times. In particular, it is not enough investigated problems related to the humanization of the Arctic area, which was dedicated to the Solovetsky XVI Forum "The humanitarian dimension of the Russian Arctic" on 20-21 Sep-

tember 2013 [9]. Constant attention and considerable resources requires the preservation of the cultural heritage in the Russian Arctic: artifacts, objects, maritime heritage, historical and cultural monuments, memorial sites of the polar expeditions, as well as the spiritual heritage. Continued studies of the ethno-cultural area of the Russian Arctic, indigenous issues, perspectives, language preservation, the development of the positive traditions government to adequately respond to the use of soft power in these matters.

Fourth, the Arctic tourism. It is a powerful, if not determining factor of the inter-regional integration. At present, each of the Arctic regions is seeking their seven wonders of the world. Obviously, it was time to create a single arctic travel agency, on which site you would find information on all tourist routes in the Arctic, from traveling to the North Pole to travel to Wrangel Island, the sacred island for the Nenets people Vaygach, etc. Among the attractions can be described as the Solovetsky Islands in the White Sea [URL: http://my-solovki.ru/ turism/how-to-get/]; national Park "Russian Arctic" [URL: http://www.rus-arc.ru/ru/Contact]; monuments of history and culture of the Kola Land, including the famous seids [URL: http://www.team51.ru/ Kola\_Istor.Htm; http:// www.wildfree.ru]. Deserve the attention of the project National tehnoteka conservation equipment of the ships of the nuclear submarines of the various projects and generations in Severodvinsk, many other local and regional cultural initiatives and projects.

Fifthly, the economy. Leading role in the socio-economic integration of the Arctic regions of transport plays today. Sea and river transport actually provide regular navigation on the icy northern seas and the river flowing into them arteries, carrying out "Northern territories" cargoes. With regard to inter-regional air routes, from Murmansk and Naryan-Mar can fly to Arkhangelsk, where the airline operates "Nordavia-regional airlines". However, the fly in Salehard has yet through Moscow. Motor transport and rail links between the Arctic regions in the general is in its infancy. Promising investment projects for the development of the transport infrastructure of the Russian Arctic in the XXI century. Addressed in Article V. Andrianov in other studies, relevant maps are published [10]. Particularly relevant in our project of building highways Naryan-Mar-Mezen-Arkhangelsk with access to the federal highway M-8 Arkhangelsk-Moscow. There are many other infrastructure projects.

Inter-regional integration in the Russian Arctic, it makes no sense to begin today in the crisis with major projects in the economy, requiring a significant investment at the regional level. The long-suffering "Belkomur" is an example. The financing of this project were discussed as early as 1997 at a meeting of the Board of Directors of OJSC "Inter-regional company "Belkomur", which was attended by the representatives of the Perm and Arkhangelsk Oblast, Komi Republic and the

Komi-Permyatskogo autonomous region. In November 1998, construction work began on the site Karpogory-Vending. Completion of the construction anticipated in 2013, however, at the present time even once laid sleepers and rails pilfered, and the search for the investors continues to this day.

Practice shows that the implementation of the Arctic projects in general, including interregional integration, requires huge investments and adequate responses to the challenges of the modern Arctic Russia.

#### The Arctic challengers to the modern Russia

The Arctic - is an expensive pleasure. Does today the Russian state, the subjects of the Russian Arctic, as well as business investment opportunities to invest in the implementation of the projects of the Arctic? The state budget of the Russian Federation - while definitely not. God forbid, as they say, follow the federal program, which has already started, and even implemented without corruption losses 2 trillions state program on the socio-economic development of the Russian Arctic 2020 Regional budgets of the subjects of the Arctic can not cope without subsidies the federal government even in fulfilling our social obligations to the people, construction of housing, kindergartens ... As for business, large OAO "Gazprom", "Rosneft", "Novatek" is not the first work in the Arctic ( Yamal, Sabetta, Prirazlomnoe, Kara Sea, etc.), but they do not can do without the infrastructure, fiscal support of the Russian state and the international integration with major multinationals.

In considering the problems of the inter-regional integration occurs so it is natural to ask about whether it will be able to answer the Russian Arctic challenges. My author's formula of contemporary challenges in this is as follows: Arctic Challenges = L + R + T + E + AC, where: L - people, human capital, R - investments in the economy, infrastructure, T - Technology, E - ecology, conservation cultural and natural environment in the Russian Arctic, AC - Arctic solidarity, integration.

For the socio-economic development of the Russian Arctic need of a huge capital. In the first place, man, formed as a result of the investment, ensuring a high quality of life, the accumulated stock of human health, knowledge, professional skills, and motivations. Analysis of the documents and literature, human development index (HDI), creativity (talent, technology and tolerance), the quality of the life of the indigenous people, personal observations suggest an extremely uneven development of the subjects of the Russian Arctic, intractable the social problems over the years. At the geopolitical situation Russia has the lowest life expectancy compared with other Arctic countries.

Second, investment in the infrastructure, the economy of the Russian Arctic, the cost of developing Arctic oil and gas reach space heights just trillions of rubles. "Rosneft" in 2008 estimated the cost of the oil development in the Arctic, which may amount to 61 trillion rubles. Of the amount claimed 45 trillion rubles. Investment required for the development of the offshore oil and 16 trillion explorations<sup>8</sup>. Naturally, the amount of the costs are constantly changing, largely depend on the demand and prices, prevailing market conditions. Deferred until the 30s of the XXI century Shtokman project, the growth of shale gas production in the United States are the main examples.

Former Minister of Regional Development of the Russian Federation V. Basargin in April 2012 reported that the design calculations for the implementation of the strategic priorities in the Arctic by 2020 will require about 1.3 trillion rubles. Around 503 billion rubles must allocate the federal budget, 724 billion - the regions. Another \$80 billion - the share of the business [11]. One part of the arctic projects for the creation of the new transport corridors and the development of the new deposits of the hydrocarbons with the maintenance of the ecological balance. Another, no less important – is the development of the social infrastructure, access to the social services and improving the quality of life, the preservation of the cultural heritage of indigenous people. All these tasks were allegedly taken into account when developing strategies Development of the Russian Arctic (February 2013).

However, the project developed by the Russian Ministry of Regional Development of the State program "Socio-economic development of the Arctic zone of the Russian Federation until 2020" will require funding for nearly two trillion rubles, including from the federal budget will allocate 600 billion rubles, and extrabudgetary sources expected to attract more than 1 trillion rubles <sup>9</sup>. Pays special attention to the development of the ecological tourism in the Arctic species, shift migration, the formation of the core network of the public roads. By this time in the zone of extremely low temperatures should appear well-developed railway network and implemented large-scale infrastructure projects. As declared priority to improve the quality of life of people living in the North, as well as ensuring an effective balance between economic activity and the preservation of the environment - as stated by the Minister of Regional Development of Russia I. Slyunyaev XI at a meeting of the General Assembly of the Northern Forum in October 2013 [12]. If such stra-

<sup>&</sup>lt;sup>8</sup> Разработка арктической нефти будет стоить России 60 триллионов. 21.04.08. URL: http://www.nr2.ru/economy/174858.html (дата обращения: 21.10. 2013].

<sup>&</sup>lt;sup>9</sup> Триллион для Арктики. Разработана госпрограмма развития Севера. URL: http://www.minregion.ru/press\_office/publications/3645.html (дата обращения: 23.10. 2013).

tegic policy will be implemented in the practice, it opens the possibility for a real inter-regional integration of the subjects of the Russian Arctic.

Leaving aside the problems of the use of the modern technology, the balance of economy and ecology in this article, I will note the importance of the Arctic to the conclusion of the solidarity and the social cohesion. Without dialogue geopolitical and strategic partnership, concentration of the resources, finance, applying the most advanced technology to master the Arctic simply can not be alone, one country. The Arctic solidarity is manifested as the integration of the economy, politics, and culture, social services in a variety of the forms both at the international and interregional levels. Partnership of the global oil companies in the Arctic is aimed, for example, to make a profit is basically a purely economic interest. Public-private partnership is to some extent balance or compromises the interests of the private business and the state. There are also other kinds of the partnerships Arctic, opening up new opportunities for the inter-regional integration in the Russian Arctic. Actual formation of the social cohesion as a public good, stable social relationships, reduce disparities in the regional development of the Russian Arctic everyone to have access to the jobs, stimulate activity, tolerance and responsibility of the people, their involvement in the life of the society on the basis of the common values.

#### The conclusion

The general conclusion can be made such that in the functioning of the Russian chain of command regional power elites of the subjects of the Russian Arctic is not yet ready for the horizontal integration. This is evidenced by the creation of the practical experience of the White Sea, as discussed in the article above. Spatial fragmentation of the Russian Federation for more than 80 subjects is in itself a conflict-factor hindering the development of the inter-regional integration. Leaders of the each subject of the Russian Arctic are motivated primarily by the realization of their current needs and regional target programs. Subjects of the Russian Arctic are the part of the several federal districts also is not particularly motivated to deepen inter-regional integration in the Arctic.

The reason for this lies not even in the human judgment. Acting objectively centralized federal system of the governance and power, budgeting does not leave room for the effective integration of the convergence regions, the establishment of the Arctic partnerships. Existing problems of the investing costly Arctic projects permanently limit the possibilities for their timely implementation.

In terms of the existing and ever-changing climatic and environmental risks are numerous current challenges in the Russian Arctic objectively require significantly upgrade management

framework of the Arctic regions and municipalities in Russia as the federal to the regional and municipal levels. Therefore, it becomes urgent establishment of the Arctic regions of Russia Union as a public-private partnership type of innovation in the XXI century.

Sustainable development of the Russian Arctic as an integrated macro-region will be determined by the quality of the human capital, economic potential and innovative, social system and the nature of the interaction between Russian Arctic. Developing integration in the Arctic, it is important to provide the necessary assistance to business entities in establishing business relations, the search for the investment, joint ventures and partnerships. Facilitate the provision of information on the legal, border, immigration and other issues, to transport tourists to the Arctic islands and the coast of the northern seas. Formation of a single Arctic infrastructure (transport, energy, communications, and information) will require a long time and huge investment, but it will eventually provide the population and the economic entities heat and energy to create modern industry on complex mining, processing of the mineral and biological resources.

The above conceptual approaches topic of the inter-regional integration Arctic actors certainly does not end there. The editors of "Arctic and North" is ready to continue our publications on the subject, including Arctic projects in the public administration, industry, transport, culture, education, as envisaged in the future, and already implemented at this time. As a result, we plan to create an information bank of the Arctic project in the XXI centure.

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## СРАВНИТЕЛЬНЫЙ АНАЛИЗ РОССИЙСКОЙ И АМЕРИКАНСКОЙ СТРАТЕГИЙ РАЗВИТИЯ АРКТИКИ

## COMPARATIVE ANALYSIS OF THE RUSSIAN AND AMERICAN STRATEGIES OF THE DEVELOPMENT OF THE ARCTIC



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российской и американской стратегий освоения Арктической зоны и проанализированы ментальные паттерны западного и восточного восприятия пространственного развития.

**Ключевые слова**: стратегическое планирование, развитие, Арктика, концепции по- Arctic, the concept of the policy литики

Аннотация. В статье проведено сравнение Abstract. The article is a comparison of Russian and American strategies of the development of the Arctic zone and analyzed the mental patterns of the Western and the Eastern perception of the spacel development.

**Keywords**: strategic planning, development, the

Now are the obvious importance and the need to expand the presence of Russia in the Arctic because of the strategic nature of the Arctic zone of the prospects for the socio-economic and political development of the country and its territories. The Arctic, as emphasized by the researchers, is a "strategic resource base of the Russian Federation, which provides the solution of problems of socio-economic development of the country" [2]. The Arctic zone should ensure the sustainable development of the country in the long term. It is through the resources of the Arctic and Sub-Arctic areas in the future it will be possible to maintain the country's economy [7]. This implies the search for the optimal management of the political and administrative model that would adapt the socio-economic and political conditions in the territory of the perspective directions of the development of the country. As noted by Sallust, "any position of power could be approved only by the means and art, by which it was originally purchased" [18, p.302]. Consequently, the implementation of a clear strategic doctrine should be based on the current level of the socio-economic development of the country, a certain degree of maturity of the management and organizational culture. These circumstances determine both the strengths and weaknesses of policies aimed at the efficient use of the resources in the Arctic at the moment.

It should be noted that, in matters of the development is traced euro-oriented Russian policy regarding the Arctic zone. Thus, the major projects in the region, as follows: "Creating a North European gas pipeline to deliver gas from Russia through the Nordic countries in the continental Europe, the Shtokman gas condensate field in the Barents Sea ( the fifth-power gas field in the world), the creation of the Baltic pipeline system (BOPS), the purpose of which is to connect the network of the pipelines Russia EU markets through the Finnish port of Porvoo and the Russian port of Primorsk, the construction of the Baltic electricity transmitting system (BALTEL) to create a common Baltic electricity market in the region, among the priority transport projects are the projects: "corridor 9 a" from Helsinki to Moscow via St. Petersburg, "via Baltica", designed to link the three Baltic States and Finland, and Poland" [8].

The question of the Spatial Development of the North Russia at the present time is no less important than the question of the resource use of these areas. It is through the development of Russian regions (especially the Arctic) it is possible to grade the presence of Russia in the Arctic. At the same resources to the development of these areas, as might be expected, may be involved in the present only in the development of the Arctic oil and gas. As noted by Karl Haushofer, the "power users with large spaces that can maneuver, having a space ..." [18, p. 307]. Thus, we can conclude about the possibility and the need for the full development of the new modern Russia, the compensation model of the development of Russian territories. This model involves developing a common strategy for the development of the Arctic (and other) parts of the country, taking into account their complex communication and the strategy to bind to specific regional strategies.

Inside oriented model of the development of the region and the country as a whole can be built in the accordance with the principle of the homeostasis, and rely on a network of the specialized research centers [11] capable of in a professional manner to form spatio-temporal parameters of the development areas. The main support of data centers today, it is advisable to consider

a research staff of the regional universities [6]. This model will enable management to depart from stereatipized in the approaches and ways of the development of the Arctic zone and the country as a whole and build future plans for development of the territories.

Russian President Vladimir Putin, June 13, 2013 drew the attention of the heads of the subjects of the need to raise the level of the management culture [4]. Its no secret that most areas of the country that does not provide adequate economic returns remain outside the attention of authorities to their future development, although at the present the strategic development of the territories, of course, gets more attention than a few decades ago. At the same time, the poor infrastructure of the civil society, which should contribute to the independent development of the regions, leads to the fact that the territory of their own and are not able to date to develop the qualitative concept of the development, all the more so for their implementation in the regions are often not planned facilities. These problems lead to the "extinction" of territories, where people prefer to leave them in the absence of the long-term programs of the development.

As an example of an effective management model can be considered a model in Germany. In Germany, the federal government provides a number of the measures for the development of territories. For example, a single scheme for the restructuring and the development of all land [9]. This allows areas not to be tied to resource stocks and design capabilities of its long-term development on the basis of the possibility of the application of new techniques and technologies. This practice can be useful to the country and region in the formation of the effective mechanisms of the government and the civil administration. Thus, the strategy of the development of the Arctic should initially consider the prospects poststress use and the development potential of the territories surrounding land.

The need to determine the perspectives for the spatial development of the Russian Arctic has led to the formation of a number of the strategic documents. To date, the current strategy is the development of the Arctic zone of the Russian Federation and the national security for the period up to 2020 [17]. The strategy defines the prospects of the Arctic, " in particular, the completion of hydrographic work, providing clearance, preventing the loss of the spatial and the worst compared to other Arctic coastal states legal environment in Russia in the Arctic, as well as the creation and the development of the Coast Guard of the FSB of Russia in the Arctic region, the creation of integrated information and telecommunications infrastructure, the development of the rescue preparedness, development of a single national system for monitoring the state of the pollution and the environment" [15].

Thus, the strategy takes into account the large number of the questions, which are reflected in the scientific literature: the socio-economic, legal, military, political, informational, cultural, ethical, environmental, and others [see, eg, 19, 13, 4, 14, 12, 10, etc.]. The strategy reflects the perspectives of development not only of the region and the country as a whole, therefore, on its quality and completeness of the implementation depends on the socio-economic and political future development of Russia.

Along with the interests of Russian interests in the Arctic are implemented and other countries. It is divided into three clusters of countries whose interests are directly intersected in the region (author's classification): I cluster - the former Soviet Union (Russia and Belarus); II cluster - NATO countries (Canada, Denmark, Norway, and USA); III cluster - a neutral country (Iceland, Finland, Sweden).

The main goals and objectives of these countries in the Arctic observed in their foreign policy concepts that reflect the mechanism of the forecasting and planning of the space and territorial development. A key opponent of Russia in the Arctic are still the United States, whose concept of the development in the Arctic is set out in the National Security Presidential Directive in 2009 [1]. Analyzing the above-mentioned strategy of Russia and the U.S. to develop the Arctic should highlight similarities and distinctive hand, which determine, ultimately, the quality of these strategies and the ability to implement them in practice (Table 1).

Table 1
Comparatyve analysis of the strategis of Russia [17] and the USA [1] in the Arctic
(Authors variant)

Nº	positions	Strategy of Russia	Strategy of usa
1	The personification of responsibility for the execution of the strategy	Facing the government as a whole, specific officials are not	Fleshed circle of the officials responsible for the implementation of the strategy
2	The term and intermediate stages	Prior to 2020, registered two stages: before 2015 (strengthening governance in the Arctic, the formation and implementation of the state program of the socio-economic development in the Arctic, hydrography, securing the external borders, the development of telecommunications systems, border control, security systems of nature, science ) and 2020 (development of the border and h / c, information systems, the Northern Sea Route, water	Term and stages are not spelled out, everything comes from the objectives and results
3	Providing treatment to the basic documents	Refers to the Principles of State Policy of the Russian Federation in the Arctic up to 2020 and beyond	Self strategy cancels the previous di- rective
4	Indicated whether the risks, threats, target	Defines key issues: economic, geographic, environmental, climatic, social, scien-	Contains the objective of Directive

		tific and technological	
5	The structure of the strategy	Common Problems - Common Goals - Common enablers	The specific rationale for each group of the issues - a specific goal for each group of the issues - specific proposals for the implementation for each group of issues
6	Areas of the development in the the Arctic and the main event	The problems: social, economic, environmental, political, military, information, transportation (including legislative support), medical, educational, cultural, scientific, international cooperation	Contains the policy on groups of issues: national, international, issues offshore (including the extension of the continental shelf by ratifying treaties with Canada and Russia), science and maritime transport (including the consolidation of the maritime transport and maritime law revision), the economic and energy security (including through cooperation within the framework of the principles of global energy security adopted by the G8 in 2006), the environment and conservation of natural resources, military (including freedom of the paths, preservation of global mobility, international influence)
7	Mechanisms for the implementation of the strategy	State program of the socio-economic development of the Arctic zone of the Russian Federation for the period up to 2020 (in development), the state armament program for 2011-2020., The concept of the sustainable development of indigenous minorities of the North, Siberia and the Far East	Implementation Mechanisms registered for each group separately purposes
8	Resources	Presumably public investment, private capital and foreign investment	The provision involving a clear process of budgeting
9	Institutionalized in the region	In the future, legislative strengthening the status of the Arctic as a special object of the government regulation and the allocation of the region as a separate object of the study and statistical observation	Development as an integral part of the state
10	The involvement of the international organiza- tions	Do not concretized	The Arctic Council and international cooperation institutions
11	A program of the system- atic research	Monitoring after the legislative allocation of the region as an independent object of the observation	Studies of the environmental issues, specific approaches for protection, pursuit of leadership in science. Decisions must be made on sound scientific and socio-economic information through the monitoring system.
12	Determination of the countries having the right to territory in the Arctic	No	8 countries (USA, Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden)

Analysis of the strategies to determine the strategy of the United States as a strategy for a regional review of the principle of the Arctic and policy in the region. Structuring issues before committing allowed the U.S. clearly aware of the value of each group of the questions for the future of the country. It should be noted that the strategy is not only identifies key challenges oper-

ates real documents, but barking in the implementation mechanisms for the real political institutions and mechanisms. Strategy of Russia in the Arctic should be defined as a strategy for the geographical principle consider the prospects of the development of the region, which eliminates the political and administrative mechanisms for its implementation and can lead to negative effects.

Moreover, it is clear that in this case we are faced with two ways of the structuring the spatial areas in the Arctic. Can be designated as their divergence gentnoe and convergent thinking in the context of the overall management paradigm that is characteristic of the western and eastern mentality. According to Tim Brown [3], this distinction is a profound conceptual in nature and determines not only tactical but also strategic vision of the leaders of the West and the East.

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## ОСОБЕННОСТИ ЧЕЛОВЕЧЕСКОГО КАПИТАЛА И РАЗВИТИЕ РОССИЙСКОЙ АРКТИКИ

#### THE FEATURES OF HUMAN CAPITAL AND THE DEVELOPMENT OF THE RUSSIAN ARCTIC



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Аннотация. Проводится сравнительный ана- Abstract. Presents a comparative analysis of жизни субъектов АЗРФ и других стран Арктики. Выявляются основные проблемы здоровья населения как одного из ключевых аспектов развития человеческого капитала.

**Ключевые слова**: человеческий капитал, здоровье населения

лиз уровня дохода и продолжительности the level of income and life expectancy the areas of the Arctic region of Russia and other Arctic countries. Health problems are identified as one of the key aspects of the development of human capital

**Keywords:** human capital, public health

Human capital in the modern society is of paramount importance for the development of the economy and the state. Human capital - is formed or developed as a result of the investment and accumulated in the human beings (humans) a certain stock of health, knowledge, habits, skills, motivations, which purposefully used in one or another sphere of the social production. Provides assistance to increase productivity and thus affects the growth of income (earnings) of the owner [1].

In the modern Russia, the situation with human capital is quite ambiguous. On the one hand, today the majority of Russians, especially in the cities, or are enrolled in higher education (we are already starting to go almost the universal higher education in the country), high consumer demands and requirements to quality of life. On the other hand, still there are age-old traits of national character, as irresponsibility and poor discipline in the absence of control, unrestrained drunkenness with true Russian scale, tolerance to arbitrary leadership and lack of the development of self-esteem. The high degree of bureaucratization and corruption of the society complements these negative qualities and creates serious barriers to the development of the human capital as the basis for a new, high-tech economy.

In the Russian Arctic - from the Kola Peninsula to Kamchatka - there are also objective difficulties for the formation of the human capital, as the harsh climate of the region and the distance from the supply bases. Let us consider some of the factors that impeded him with all the relevant development. First of all, it is quite low wages in Russia in the general and the Arctic macro-region in particular in the comparison with other countries, to actively explore the Arctic (see Table 1).

Table 1

The average salary in Russia and countries of the world in 2012 [2]:

Subjects of the Russian Federation and the countries of the world	The average monthly salary
Russian Federation	22,9 thousand rubles
Republic Karelia	21 thousand rubles
Murmansk region	30,7 thousand rubles.
Arkhangelsk region	23,8 thousand rubles
Nents autonomous District	46,2 thousand rubles
Yamalo-Nenets autonomous District	58,6 thousand rubles
Krasnoyarskiy region	24,6 thousand rubles
Republic Saha (Yakutiya)	31,3 thousand rubles
Chukotskiy Autonomous District	47,8 thousand rubles
Denmark(Greenland)	2500 Euro [3]
Iceland	2431 Dollars USA [4]
Norway	3678 Dollars USA [4]
USA (State Alaska, 2011 г.)	4078 Dollars USA [5]
Canada	2724 Dollars USA [4]

As you can see, the salary of a resident macro-Russian Arctic is 3-4 times lower than those in other developed countries in the Arctic. If the Russians need for quality of life (consumption, comfort, education, etc.) similar to those that in the developed countries, it is natural that he has a lot more work, so at least partially meet the increasing consumer demands.

According to the statistics, about 80 % of Russians are forced to work overtime. It's not just the usual delay in the office for 5-10 minutes after the end of the day - the specialists remain in the offices of up to 3-4 hours more than put norm. Meanwhile, the level of the remuneration, and the attitude of the head usually remain unchanged, and many people are forced to accept these conditions in order to keep their jobs [6]. Of the 80 % of those surveyed 61 % are the professionals

who are trapped at work in the excess of the graph is almost constant and even take some of the tasks on the house [6].

In the end, it turns sombre picture: the day the Russians for much longer than it was under the Soviet Union. 8-hour working day was significant social gains of the socialism and calculated temporitme of the features and loads of the industrial civilization. And today temporitme significantly increased the speed of information flow greatly increased (the amount of information in the world doubles every 5-7 years), neuro-psychological stress also significantly increased, and the length of the working day has increased and has become both the societies of the XIX century. - 10-12 hours spread widely over-exploitation. It is natural that the health of the population is affected most adversely.

For example, look indicators for the cardiovascular disease (CVD), which are the main causes of the death in the economically developed countries of the world and most of the countries in the transition. Every year the world of CVD causes nearly 17 million people, and in Russia in 2007 have died from the 1 million 232 thousand 182 people. CVD caused by atherosclerosis are the cause of the high mortality in Russia, far exceeding death rates from these diseases, both in the eastern and especially in the Western European countries. Thus the greatest differences in mortality (5 to 20 times) are observed in the most working-age population, 25-64 years [7]. Compare these data with the average life expectancy in Russia and countries of the Arctic.

Table 2

The average life expectancy in the countries of the Arctic [8]:

The place in the world	Country	The average life expectance, years	male	female
8	Sweden	80.70	78.4	83.0
9	Iceland	80.45	78.3	82.6
10	Canada	80.45	77.0	83,9
13	Norway	79.90	76.5	83.3
27	Finland	78.75	75.2	82.3
30	USA	78,10	75.2	81.0
32	Denmark	78.05	75.7	80.4
113	<u>Russia</u>	69.80	64.0	75.6

As we see the picture is sad.

We should also mention some of the indicators of the health of Russians. For example, from 1990 to 2005, the total number of disabled people in Russia has increased by 3 times and on January 1, 2009, according to the Federal State Statistics Service; the total number of disabled people in Russia exceeded 13 million people - more than 9% of the population [9, p. 541]. And this despite the fact that not all people with severe chronic illnesses that limit their ability to work, giv-

en the level of disability. Also, has broken all records of child morbidity: for example, at a meeting of the Russian Government Mikhail Fradkov 20.07.2006 admitted that only 30% of births, but may be found to be healthy [9, p. 465].

Added to this is a serious defect in the social policy of the Russian Federation, as the high cost of and payment for the health care services. The right to health care, although guaranteed by the Constitution of the Russian Federation, with each year becoming more and more fictitious. Even in public hospitals and clinics are almost no services available for free. If the difference in pay is several times the cost of the treatment and medicines in Russia and the developed countries is identical, and the tragicomic situation: in order to earn the necessary funds for the treatment and medicines, a person needs a lot of work and have "iron" health.

But let's say seriously ill people of working age, having saved the required amount, and after the course of the treatment, returned to normal - the salary (\$ 760) for 10-12 hour day. A significant portion of the funds he needs to spend on family and children, emergency supplies, payment of utility bills (and more and more to pay on the mortgage loan for a motor vehicle or household appliances), education, leisure. By counting these costs, even by the most conservative rates, it is easy to conclude that in this case the person is not required to be provided even diet. And in the arctic region of Russia, where the long cold winter, you need high-calorie diet with increased the vitamins and amino acids. That is, theoretically, the northern people living in these conditions will not be able to become healthy!

The result: to make a more or less decent life, to ensure consumer needs and standards do not even on the west, and in the Eastern European level, most Russians have to work "on the wear of moonlighting or taking overtime hours in the main job, with much denying themselves and getting into endless loans".

This is complemented by a number of the negative social and psychological factors:

- a) An aggressive information- psychological environment, the abundance of negative media plan, a harmful effect on the psyche.
- b) Psychological tension in the society, a lot of conflict in the home, at work, and often in families.
- c) Low consumer culture of the population.
- d) The alienation of power from the society, where the majority of people in the critical situations do not have to rely on the help of the authorities.
- e) Chronic mental frustration because of the obvious social divisions in the society.

f) The actual supremacy ideology of the social Darwinism in a society where people with wealth and power, openly mock the disadvantaged, and the luxurious life of Russian pop stars and remains at the center of the media attention.

There is a threat that the population in Russia, including the Arctic zone of the Russian Federation, will not be a factor in the modernization, and will be unable to maintain the infrastructure of the economy, even at this very low level. Disparities existing patterns of the socioeconomic development pose serious obstacles to the human development in Russia as a whole, and in the Arctic regions in particular.

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# APKTUYECKUE СТРАТЕГИЧЕСКИЕ ПРОЕКТЫ И ИХ РЕАЛИЗАЦИЯ THE ARCTIC STRATEGIC PROJECTS AND THEIR IMPLEMANTATION



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**Аннотация.** Презентация модели кооперационных проектов по освоению ресурсов Российской Арктики, разработанная проектной группой из Архангельска

**Ключевые слова:** Арктика, Whitefield, управляющая компания, модель, проекты, кооперация, государственная поддержка, опцион, форвардный контракт, эффективность

**Abstract.** Presentation of the model of the cooperative projects to develop resources in the Arctic, developed by the project team from Arkhangelsk

**Keywords:** Arctic, Whitefield, the management company, the model, projects, cooperation, specific measures of state support, options, forward contracts, efficiency

#### Introduction

The Arctic – is a special macro-region, characterized by extraordinary natural resources. No coincidence that many of the countries drawn attention to it. First and foremost, it's Russia. But in the implementation of the projects in the Russian Arctic, there are a large number of the risks that differ from the development of the other areas of the difficult environmental conditions, a special legal status, and high financial and technological risks. Therefore, in this paper we propose an innovative model of the cooperative projects to develop the resources of the Russian Arctic.

## Innovative conceptual approach in the development of the Arctic projects

To characterize such areas can introduce such a concept. As White-field (developed by a "model of the cooperative projects to develop Arctic resources", January-June 2013, the Moscow School of Management "Skolkovo"). And for their development requires special, quite different

approaches to the successful launch of the projects and their realization of the so-called White-field-projects. Solutions that meet the conditions of the implementation of these projects will be the promotion of integrated cross-sectoral cooperation projects. The effectiveness of combining different-detection projects they have common bonds increases several times. Thus, in the Arkhangelsk region the most possible projects – are the mining and processing of the metal ores New land, construction of a tidal power plant in Mezeni, the construction of a plant for liquefied natural gas.

Results of these projects in the implementing them separately and integrated approach dramatically different. *First*, the volume of the investments in the project in the second case it is almost a quarter less. *Second*, the payback period for each project individually account for 16 to 45 years. A comprehensive project will be repaid in 13 years. And this is becoming attractive to investors. And this is only the economic advantages. And in addition to this, participants also share the risks to the realization of the project. The main question is how to run such complex Arctic projects?

The decision to launch is the introduction of a special mechanism that will allow it to do so. The Government of the Arkhangelsk region and NArFU named after M.V. Lomonosov create a joint management company (hereinafter - CC), which would have carried out the elaboration of such projects, the preparation of the necessary approvals, was seeking potential participants and documents for the negotiations with them. After that, with the assistance of the government is to attract participants. The most important thing - is qualitatively researched and prepared a set of the documents and materials for the upcoming project, and the development of the proposed standards, such as tax, customs and similar benefits, and non-standard measures of the state support.

Such non-standard measures of the state support could be previously used the Arctic options (developed by a "model of the cooperative projects to develop resources in the Arctic", January - June 2013, the Moscow School of Management "Skolkovo"). This specific financial instrument that allows you to ensure the establishment of the common elements in the projects. For example, the implementation of the each project requires the construction of the port. UK concludes with each of the potential participants in the agreement of intent to implement the project. After that, under the state guarantees UK release option for the port services, with which it is possible to attract investors for the construction of the port.

UK concludes with potential R&D contracts forward as the guarantor of the creating the necessary technologies in the stipulated time.

The management company of the proposed algorithm, we should be formed in two stages. In the first phase it will provide modeling and the study of the projects, as well as search for the potential participants. The second phase will already be further including a unit responsible for providing specific support measures and the project management. In this case, the Criminal Code can not only manage projects outside the realizable model, but also by others. For example, the construction of deep water port in Arkhangelsk. When creating such a management company in two stages budgetary funding of the Criminal Code are excluded from the second stage.

After the examination of the implementation of such a model in the government, NArFU and Regional Council of Deputies, its qualified assessment professionals, approval, implementation and transition to the real work of the development and implementation of such large-scale projects may be launched by the end of 2015.

## The presentation of the Arctic cooperated projects











Nº	Мероприятия	Физ. характер истики	Затраты без кооперации млн.руб.	Затраты с кооперацией млн.руб.
1	ТРАНСПОРТИ КОММУНИКАЦИИ:			
	порт на Новой земле, в Мезени ж\д путь Белкомур (Карпогоры-Мезень)	2 200 км	35 000 2400	35 000 2400
2	УГЛЕВОДОРОДЫ: нефте- и газопроводы завод по сжижению природного газа	1 950 км 500т/ч	195 000	175 000
3	<b>ДОБЫЧА цветных металлов</b> : Горный комбинат Горнообогатительный комбинат	270 млн. т 300 тыс.т в год	44 700	6 300
4	ЭНЕРГЕТИКА: Мезенская ПЭС ЛЭП	500 МВт 480 км	50 000 9 000	50 000 9 000
5	СОЦИ АЛЬНАЯ И Н ФРАСТРУКТУРА	20 000 чел	4 000	4 000
	ИТОГО затраты (без соц.)	336 10 0	277 70 0	
	Внутренняя норма доходн		12,2%	
	Рентабельность инвес		1,25	
	Дисконтированный срок окупаемо	16 - 45 лет	13 лет	









# М еханизм запуска комплексных проектов









## Специфические меры гос.поддержки









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Первый заместитель директора

Центр компетенции проектного управления

Центр создания и запуска проектов

Центр управления проектами

Заместитель директора системный архитектор

Информационно аналитический центр

Центр продвижения проектов

Бухгалтерия

Кадровая служба

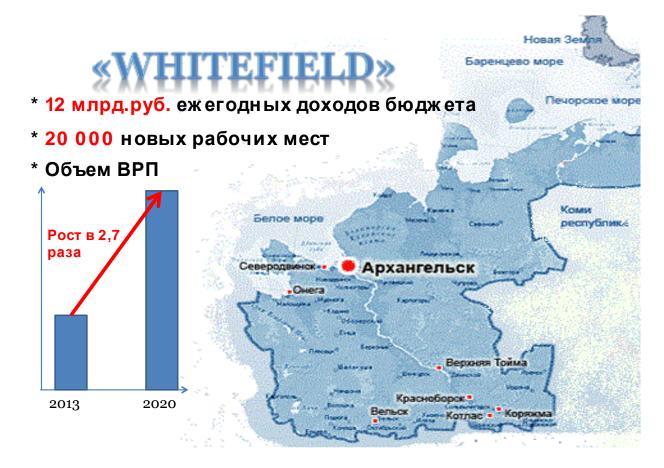
Юридическая служба

Центр организационно - методического сопровождения

Годовое финансирование

84 млн. руб. (за счет собственных доходов)

Мероприятия	Сроки	Прав-во АО	САФУ	Разраб очики идеи	ОАО УК «ПО»	Участ ники проек та
Разработка эскиза проекта в Сколково	Июнь 2013					
Представление результатов работы губернатору и ректору Принятие решения о работе над проектом	Июнь 2013					
Ведомственная оценка ИОГВ Архангельской области	Июль 2013					
Подготовка пакета документов для федеральных исполнительных органов государственной власти	Август – октябрь 2013					
Подготовка предложений по включению проекта в госпрограмму «Соцэконом. развитие АЗРФ»	Сентябрь- октябрь 2013					
Создание ОАО управляющей компании «Проектный офис» (бюджетные решения)	Октябрь 2013					
Привлечение экспертов и подготовка предварительного технико-экономического обоснования	Октябрь 2013 -Июнь 2014					
Поиск партнеров, участников, драйверов проектов, проведение переговоров. Согласование на федеральном уровне	Октябрь 2013 - Март 2015					
Построение итоговой модели, подписание соглашений	Октябрь 2015					
Подготовка пакета документов по внедрению специфических мер государственной поддержки Арктических проектов	Декабрь 2015					
Подготовка технико-экономического обоснования по элементам модели	Март 2016					
Разработка проектно-сметной документации элементов модели	Декабрь 2016					
Реализация проектов	Январь 2017					



#### **Conclusion**

What will be these projects? For the Arkhangelsk region is, first and foremost, a sharp increase in GRP, creation of the new jobs, increase of the revenues, and for NArFU is an opportunity to strengthen the Arctic vector in its development. But the most important thing is that this is a chance for the region to become a pilot area for the launch of these Arctic projects, and for the country - to make a huge and very real breakthrough in the Arctic.

Presented in this paper projects developed during the training at the Moscow School of Management "Skolkovo" in 2012-2013 the project team consisting of: *Vitaly Akishin*, Head of the Department of Energy for Energy and Communications of the Arkhangelsk region; *Irina Deputat*, head of the Laboratory of Applied Psychophysiology Institute for Biomedical Research; *Victor Ikonnikov*, head of the Agency for tariffs and prices of the Arkhangelsk region; *Ekaterina Lapina*, editor of the newspaper "The Arctic vector"; *Maria Nesterenko*, deputy director of the Arctic Centre of Strategic Studies NArFU; *Artem Podoplekin*, director of the NBI "ArktikMed"; *Daniel Shaposhnikov*, director of the GBU JSC "Regional Centre for Energy Conservation".

Reviewer — Toskunina Vera Eduardovna, Doctor of Economy UDK 332(004)

# СИСТЕМНЫЕ ОСОБЕННОСТИ УСТОЙЧИВОГО РАЗВИТИЯ РЕГИОНОВ ЦИРКУМПОЛЯРНОЙ ЗОНЫ

## THE SYSTEM FEATURES OF THE SUSTAINABLE DEVELOPMENT OF THE REGIONS OF THE CIRCUMPOLAR AREA



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Аннотация. Представлен системный подход Abstract. The article presents a system apпо изучению устойчивого развития Арктического региона, его основные признаки как системы, указаны особенности развития языков.

proach in the research of the sustainable development in the Arctic region and its basic evidence as a system, the attention is paid to features of the development of the languages

Ключевые слова: Арктический регион, признаки системы, финно-угорские языки

**Keywords**: the Arctic region, evidence of the system, the Finno-Ugric languages

The Arctic area of the planet is a hard woven network of the geographic, climatic, cultural, political, and economic characteristics that formed the system of the total circumpolar civilization. In the XXI century, the territory and waters of the Arctic attracting economic and political attention of the world, ready for the development of the wealth in the region. This situation exacerbates the cultural and social aspects of the existence circumpolar civilization, as the perception of the sustainable economic development of the regions do not coincide with the established way of the life of the local population. Moreover, sustainable economic development and cultural reproduction of the Arctic civilization seem antagonistic purposes in the future Arctic. The purpose of a market economy system is the realization of the increment of the wealth of the opportunities through the creation of the surplus value that is attractive for the development of the territory. The way of life of the local population is the result of long-term adaptation to the natural conditions, forms of the historical tradition and provides a contribution to the treasury of the cultural

wealth. Therefore the relevant issue is the determination of the balance of such a complex and environmentally sensitive region of the planet.

In the case where it is impossible to demonstrate, to represent him, expressed in the mathematical form, but it must be emphasized that the object is a single and complex, with the uncertainty, it uses the concept of "system" [2, p. 14]. The Arctic region is (a big macro-region) corresponds to the concept of the system, as there is an opportunity to highlight its main features of the system (Table 1). This makes it possible to consider the issue of the sustainable development in the region through a systemic approach.

Table 1

The signs of the Arctic region in the framework of a systematic approach

Nº	The feauture of the	The content of feauture
p/p	system	, ,
1	Integrity	As a region, the Arctic is a unified physical and geographical area of
		the planet, adjacent to the North Pole
2	Severability	The region includes the outskirts of the continents of Europe, Asia, North America and the Arctic Ocean, which can be divided into the
		following waters: the Arctic Basin, North-European basin, the sea
		within the continental shelf of North America and Asia. The region
		can be divided by state boundaries, political and economic inter-
		ests of the Environment in the current ethnic groups. Perhaps the division on the basis of the culturological
3	structuring	There is a certain and relatively stable order in the Arctic region
J	Structuring	between selected elements of the territorial, biological, civiliza-
		tional lines
4	Systematic	The region is present climate, cultural, political and economic rela-
		tionship between the structural elements. It is possible to identify
		systematic relationship between nature and the consequences of
_		choices in dependent territories
5	Isolation	The Arctic region is located on the territory of different countries, and this is the cause of diverse policies to address future develop-
		ment. Macro-region includes separate structural elements that
		enter into the competitive race thanks to the political will of the
6	interaction	Territorial community compels countries circumpolar areas and
		economically prosperous state to seek possibilities of interaction
		with each other. The reaction takes place within the system and
		the external environment. Therefore, the development of the Arc-
7	Interchangeability of	tic region affects the adjacent area (open system)  Assumes that the same result can be obtained with various combi-
1	components	nations of resources. This is the basis of building coalitions to
	55ponents	achieve economic effects. However, in the natural system, this fea-
		ture is implemented very peculiar, exacerbating the vulnerability
		and fragility of the biological system in the Arctic
8	Limited combination	Despite the many uses of the natural resources of the Arctic region
	of components	climatic conditions severely limit the potential economic opportu-

		nities of natural resources. Modern technology does not provide a sufficient rate of return to competition		
9	continuity of	Dialectics of the development of the region and of human civiliza-		
	development	tion is limited knowledge of the human civilization		
10	lag	Provides specific climatic conditions, which creates a dependent		
		of the future state of the system from the previous		
11	complexity	Changes in one part of the system causes changes in other struc-		
		tural elements of the system, which is manifested in the Arctic re-		
		gion as a "kitchen weather on the planet"		
12	The probabilistic	Manifested in the complexity of the system and its stochastic be-		
	nature	havior. The Arctic region as a combination of several systems man-		
		ifests itself is not deterministic, which is expressed in probabilistic		
		judgments		

When using a systematic approach V. N. Volkov notes that the directions of the science, applied the notion of the "system" emerged interdisciplinary areas that developed as independent, but actually focused on the systemic research<sup>1</sup>. To those include situational modeling and contingency management (D. A. Pospelov, Y. I. Fangs, L. S. Zagadskaya Bolotov), conceptual metamodeling (Vladimir Nechayev), systemology phenomenal (B. Fomin) [2.6]. The variety of the concept of "system" is methodologically difficult to use a systematic approach to the description of large and the heterogeneous objects, complicating it. But perhaps the use of the interdisciplinary advances in the science to determine the direction of the development of the system, identify its features in a historical context, it is appropriate for the macro-region. The Arctic region can be represented as an economic system, but can be perceived as a cultural system that focuses on the preservation of traditions. Simulation allows us to consider these systems as components of a single regiona.

The peculiarity of the system approach is the recognition of the additive behavior of the system (summative), but due to the higher value of the system as the integrity of the (emergence, from the English. Emerge - to appear) than either a simple aggregate of its individual components (parts).

If we consider the Arctic region only from the point of the view of the economic efficiency, which is the basis for the political controversy surrounding the "natural larder", the lost part of the socio-humanitarian component of the system. However, the study of the history of the ivilization

<sup>&</sup>lt;sup>1</sup> Волкова В. Н. Теория систем: Учеб. Пособие / В. Н. Волкова, А. А. Денисов. М.: Высш. шк., 2006. 511 с.

shows that the Arctic civilization took place and has the experience of the survival in a natural environment. Sustainable development of the Arctic civilization is not the main purpose of extracting maximum economic profit, but resource of the region. Based on the patterns of the interaction between parts and the whole integrity of the property (emergence) has the following features:

- a) Properties of the system are not the simple sum of the properties of its components (parts), the economic component and a cultural component can not be reduced to the sum.
- b) Properties of the system depends on the properties of its components (parts), the economic component is considered a humanitarian, cultural component in the public laws of the development.
- c) In the combined components lose some of its properties, is the inherent system (the one hand, the system suppresses the number of the components of the other - the components in the system to acquire new properties), and it is a general system problem since it is difficult to predict.

On the basis of these assumptions leads to the following conclusions: 1) for the effective development of the region will be suppressed cultural component properties that will lead to the properties of the economic systems, the operation of which is characterized by inconsistency, uncertainty, information asymmetry, conflict, economic risk of market models; 2) it is taken into account survival experience circumpolar civilization that suppresses and converts the economic goal of the increasing surplus value to resource management in the region. Systems based on the preservation of the traditions, are more resilient in the face of uncertainty, which is more consistent Arctic.

Similar ideas have penetrated and sustainable development in the Arctic territory. In the studies of Professor Y. Lukin says debatable issue determining the Arctic regions<sup>2</sup>. In modern Russian Arctic zone includes the Arkhangelsk and Murmansk regions, Nenets Autonomous District, Republic of Karelia, having direct access to the White, Barents and Kara seas. In the existing grid at the end of XX - beginning of the XXI century. The administrative- territorial coordinates the Republic of Komi, Vologda and Kirov region, Perm do not have direct access to the coast of the northern seas, therefore they are not among the Arctic territories of the country. Although historians have called the land - whether in the XVI-XIX centuries. The general and rather controversial term of

 $<sup>^{2}</sup>$ Лукин Ю. Ф. Великий передел Арктики. Архангельск: Северный (Арктический) федеральный университет, 2010.

Pomorye [3, p. 300-301]. Experience of Pomorye in the economic structure, land use, distributed along with the historical development of the Ural region and Siberia.

According to N.V. Fedorova, all the cultures of the circumpolar areas of the planet are divided into two arrays: 1) North American and Siberian (Eskimo), which is characterized by a hunting system eco cultural adaptation, extensive distribution and relative uniformity of the cultural and biological characteristics, folklore and language of the Eskimos; 2) The North Eurasian with its ethnic and cultural diversity and herding system of the eco cultural adaptation [6].

The North Eurasian cultural diversity reflected in the language of the Finno-Ugric basis. By the development of language, you can appreciate the history and civilization of the circumpolar Arctic territories. Linguist Baudouin de Courtenay, learning a language is closely tied to the study of the society and its concept of the history of language is associated with an objective history of the society. Using linguistic approach could estimate the approximate age of the circumpolar civilization to determine its stability as the laws of the development of the system and the laws of the feasibility of the system.

Researchers of the Finno-Ugric languages count up to 1,200 words that existed in the ancient Finno-Ugric language (proto-language) and the extant [5]. Hungarian scientists have found that from the time when the territorial separation of the two related languages from each other 1000 years have passed, the common root words in these languages is 74%, after 2000 years is 55%, after 3000 years - 40%, over 4000 years - 30 %, in 5000 - 22%, in 6000 - 16% in 7000 years of common words is about 10%.

Finnish scientist A. Raun believes that the Hungarian and Finnish common root words, there are between 21 to 27% in Mordovia and Mari - from 36 to 40%, in the Udmurt and Komi - 70% in the Nenets and Finland - 15%, Nenets and Hungarian give only 13% of the common roots. That is, since the spatial separation of the Finno-Ugric and Samoyed languages has been more than 6000 years of Hungarian and Finnish - about 4500-5000 years, the Permian languages from each other - about 1000 years.

On the basis of these data, we can recognize that the Ural linguistic community ( or tongue - base) existed long before the IV millennium BC., a Finno-Ugric language is the basis functioned until about the III millennium BC, disintegrating by the end of the III millennium BC. For intermediate proto-language. According to EA Helimski, the picture of the former continuous range, from the Baltic to the Urals, it looks like much of the stretching and torn in many places strips [5]. The ancient Finno-Ugric language characterized by a significant compartmentalization into dialects, of which evolved the modern languages. The continuous expansion of the territory occupied by the

Finno-Ugric points to the effectiveness of their culture and way of the life in the Arctic region and the Arctic territories.

Over the past 400 years as a result of the development of the Urals Russian Empire and the cultural changes of the population is undergoing serious transformation in the language. Language fixes the particular history and culture of the peoples living in the region, the result of the interaction of the different dialects and languages. According to the chronicles, Russian, namely Novgorod, has penetrated to the Urals in the XI century [4]. Initial development took place by way of the Upper Prikamye. When you check in Russian occupied territory is usually empty, but often lived near the Komi-Perm. Eco-cultural adaptation of the Urals does not involve living individual families. Therefore the Russian diaspora were in close contact with the Komi-Perm inhabitants, there were mixed, bilingual family. Takes over the previously alien to the economic way of life. As a result, it Komi penetrated many Russian words, but the Permian Komi dialects enriched vocabulary, especially in the domestic sphere, as the vanguard for the purpose of the survival. In the language of systems theory, this corresponds to the convergence of the law "requisite variety".

The interpenetration of the cultures for a common goal reconciled nature (survival in the harsh natural environment) has expanded the ultimate capabilities of the circumpolar civilization. The cultural component of the Arctic as a system can be regarded as essential to its self-organization in order to resist entropy (destruction).

According to Professor Y. Lukin, sustainable development of the Arctic zone - is steadily progressive development, the process of the permanent positive changes in the policy and management, socio-economic, spiritual and cultural spheres of the northern regional societies and municipalities, implementation of the socio-cultural measures, the modernization of the Arctic infrastructure, conservation and preservation of the population of the natural and cultural environment [4, p. 27].

Priority achieve only the economic benefits of the development in the Arctic circumpolar provoke the loss of the ancient civilization. And in a system approach, the economic suitability loses not only the Russian Arctic zone, but also the surrounding regions of the Urals and Siberia. Based on the theory of the systems is bound to affect the quality of life of the population and provoke strategic impossibility welfare state.

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## СОЛОВЕЦКОЕ МЕСТНОЕ СООБЩЕСТВО: САМООРГАНИЗАЦИЯ ПРОТИВ РАЗОБЩЕННОСТИ

## THE IOCAL COMMUNITY OF THE SOLOVKY ISLANDS: **SELF-ORGANIZATION AGAINST DISSOCIATION**



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формы кооперации и взаимопомощи на Соловецких островах в целях сопоставления с for Solovky Islands with a view to compare современной ситуацией в поселке Соловецкий. Предлагаются пути преодоления дезинтеграции местного сообщества за счет изменения структуры занятости населения и разработки новых жизненных стратегий

Ключевые слова: Соловецкие острова, местное сообщество, самоуправление

Аннотация. Анализируются исторические Abstract. This article analyzes the historical forms of the cooperation and mutual aid typical them with the modern situation in Solovetsky settlement. The ways of overcoming of the local community disintegration via restructuring of occupational pattern and elaboration of the new life strategies are proposed

> Keywords: Solovky islands, local community, self-government

Solovetsky Islands, known in Russia and far beyond its borders, it is not only the monastery with six hundred of the history, not only the camp past of the archipelago, is not only the amazing architecture and charming nature, but also the people. People, businesses and destinies are shaped past the islands and the people, actions and values that build the present on the Big Solovetsky Island in the village. Solovetsky has just over 1,000 residents, and it is worth noting that in the recent years the birth rate has increased, more and more filled with groups of kindergarten and first grade. On the one hand, on the island of a considerable part of the population consists of people of the retirement age, on the other - the children who have received a good education can provide the basis for the renovation of a community which is now in a very fragmented state.

But here we are faced with two questions: whether young people will want to link their lives with Solovetsky Islands, where their childhood, and whether after 5-10 years the opportunity and the need for the development of the village with the civilian population in the archipelago? Being equated to the Far North, the Solovetsky Islands, however, have one of the most attractive climate in the Russian Arctic, especially at given latitude. It is also important in this context is to point out the connection between the work and the peculiarities of the resourcing in the local territory, which, in the turn, is in a certain geographic and the climatic conditions. Historically, the form of labor on the scale of a monastery (or monasteries) were collective (joint obedience and service, but at the same time - making privacy for prayer). The same applies to the camp period, and the period of the operation of the educational unit of the Northern Fleet. Mode also visit the island was originally a special one. Pilgrims can stay on the island for more than three days, during which the monastery gave them a roof over his head and fed. To stay longer, of course, only men had to be a serious intent to work for the good Reverend, and fully accept and follow the monastic code during their stay on the island.

So just a "visitor" was much less because they do not long could. The balance between the number of the inhabitants of the monasteries and the main monastery complex creating harmonious human-induced pressures on the archipelago, which has since been lost. To date, the villagers rely in their employment to ensure tourism and pilgrimage as business income in a four-season shipping times higher than the annual income of their primary employment. In this regard, it is time personal duties relegated to the "second plan".

The excursions in the half-recovery or non-functioning almost ruined monasteries held for the visitors, but the accommodation and eating establishments are organized only in the village surrounding the monastery itself, which gives an unprecedented concentration of the residents and the visitors on the same piece of the bland, an area of not more than ten square kilometers of three hundred possible in the archipelago. Since the service sector dominates the production, remained forgotten areas such as the collection and processing of seaweed, animal husbandry, maintenance mowing meadows and fishing. With the loss of these areas has been lost and the infrastructure that is important, not only in manufacturing but also in the social terms. Of all the possible activities, the majority of the population occupied only by the service industries. This work does not require special skills and qualifications. As a consequence, people who do not know the particular technologies and knowledge are easily interchangeable in their professional niche.

For clarity, let us turn to the situation in the Solovetsky monastery late XIX - early XX century. Four-year school for the employees was in 1913 transformed into vosmiklassnoe School, where he was given knowledge not only in the field of theology, literature and monastery rules , but the practical skills necessary to engineers, carpenters, electricians, potters, builders, agriculturists, blacksmiths. The monastery was unique in that it has released its specialists in the world, with

some experts to be among the brethren and serve the common cause. It is no accident monk's experts invited to stay on the islands at the farm after the dissolution of the monastery in 1920, and even later - in the camp period.

On a historical example see that the tradition of education in the remote of the northern archipelago of the islands created by the culture of the living, environmental, economic, personal and professional relationships, as well as bringing a cohesive team, which was a spiritual and intellectual "school". In this period in Solovki camp did not develop education, but the active research activities in the field of archeology, history, art history, archival work, botany, chemistry, and medicine. School cadets, replacing the "Elephant", again had an educational function. And even the military did not just put his base here, but organized training squad.

Continuing education, combined with physical and intellectual labor, ideological or spiritual atmosphere shared by all members of the community who lives on the Solovetsky Islands - this is the formula of unity and creative activity that allows you to not only survive, but to create works of the culture, make inventions and discoveries. However, what is on the Solovetsky Islands in the above areas today? The village is a resident accidentally and purposefully people who came here from all over the country and abroad, in which "formed a more or less closed community that has no roots and related traditions, but with an overall short-lived history and shaped its way of life" [1, p. 126].

What factors hinder the cooperation of the local population today? First of all - it's distorted information about the administrative decisions taken by the provincial and federal level regarding the fate of the village, historical and architectural heritage of the Solovetsky Islands. Meetings are not going to discuss real solutions to pressing problems, and to formally inform the citizens about the previously adopted decisions behind closed doors. In the environment of the local community does not have a leader or reference groups composed of Solovki, which would serve as a catalyst for the implementation of the projects and convinced that the initiative "from below" is not so barren as it seems pessimistic mood of the community.

The second reason for the disintegration of the local population in Solovki is as follows. Interest in the development of the territory where the locals live, is only possible if they plan on living descendants and relatives in the same area. If they seek to help consolidate his children and grandchildren major cities outside of the Solovetsky Islands, they are, for the obvious reasons, will have no interest in the future development of the village. In this regard, there is a lack of long-term thinking for years to come. In addition, there is no way desired, an image of the archipelago,

which would like to see as a result of the transformation, construction, restoration and upgrading of the infrastructure.

The third reason for the passivity of the local population and their unwillingness to cooperate on their own, that the regional authorities have taught residents to the fact that domestic problems will solve themselves of power, not the local community. Therefore solovchane waiting for the help "from above", without taking any steps, even for the simple municipal problems.

It remains an open question as to whether in the coming years to the Solovetsky Islands valued human environment, or will come to the forefront of the historical and architectural and spiritual heritage, interests and priorities of the monastery. And will the villagers who live outside the monastery, worthy of the socio-economic investments that are planned? The complexity in the study of this problem lies in the fact that we see a particular social "education, whose identity has not yet or can not in principle take place, and hence the ghostly bands, in the fact," not a collectiv. In such a community of people united not by choice, but by the experience, if it should imply some a priori shared affective states (pain, suffering, joy, pleasure), both very intense and quite worn out [2, p. 8]. But it seems to us a possible gradual self-organization of the population of the society on the basis of the historical examples of the labor and the value unity on the Solovetsky Islands.

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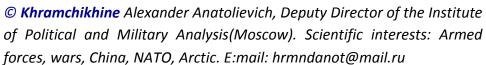
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## ОСНОВНЫЕ ПРОБЛЕМЫ РОССИЙСКОЙ АРКТИКИ

#### THE MAIN PROBLEMS OF THE RUSSIAN ARCTIC

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Аннотация. Коррупция, бюрократия, отсутст- Abstract. Corruption, bureaucracy, lack of вие стратегии развития являются общероссийскими проблемами. Главные проблемы собственно Арктики – климат и неразвитость транспортной инфраструктуры. Без развития транспорта говорить о перспективах развития Арктики бессмысленно. Кроме того, необходимо размещение вдоль арктического побережья арктических бригад и сил ПВО ВС РΦ.

Ключевые слова: Арктика, коррупция, стратегия, население, транспорт, аркти- lation, transportation, the Arctic Brigades ческие бригады

strategy development are all-Russian problems. The main problems of the Arctic itself are the climate and poor transportation infrastructure. Talks about the perspectives of the development of the Arctic are meaningless without the development of the transport. Quartering along the Arctic coast of the Arctic brigades and air defense forces of the Russian Federation Armed Forces is also need.

**Keywords:** the Arctic, corruption strategy, popu-

The main problems of the Russian Arctic today are the bureaucracy and corruption, the lack of a coherent development strategy, climate, with extremely low population density and an almost complete lack of the transport infrastructure.

## **Corruption and Beroucrasy**

It is clear that the major challenges of the today's Russia, seriously threatening its national security. No less obvious that they can not be resolved at the level of one region or a group of regions. It is extremely difficult for them to address the deep-rooted corruption in the national mentality. We must frankly admit that in the corruption somehow included almost the entire population of the country and a very large part of it is quite happy (even though constantly expressed their dissatisfaction with the status quo). By the way, why is the obvious illusion of the hope individuals Russia solving the problems of the corruption and bureaucracy by separatism? In the end, the same problems just played back at a lower level, squalid and cynical. A perfect example of this is the current Ukraine.

It is also clear that these problems can not be solved purely instrumental and repressive methods, political solutions are needed nationwide scale. A discussion of these solutions is a separate topic, and certainly beyond the scope of the Solovetsky Forum. One can only note that, judging by the results of almost Post-Soviet elections, the progreesive North Russia and democratic South of Russia, which is probably explained by the historical traditions. Accordingly, the North has the potential to become the "vanguard of change". However, as the above example of Ukraine, democracy itself is not a panacea from any adverse of the socio-political and economic events, and even from complete degradation of the state. Democracy is a good way (in the first place - a means of the social control over the power), but it is in any case should not become an end in itself. The minimum, the public should be willing to use the tool and realize what it's for.

## The Lack of the Strategy

Together with the previous problem, it is national in the scope. The development strategies are not present at the country as a whole or in the individual industries, institutions and regions. A good example in this case is Serdyukov's military reform. As a result of this reform, the Russian Armed Forces have undergone enormous changes (mostly negative, although there were positive aspects), but is still not known nor any of its authors nor its real purpose, no criteria by which conducted the conversion. During the entire post-Soviet period has not become clear how and why we build aircraft, although now in their construction are invested very heavily.

The most important reason for this situation is, apparently, "uselessness" of the current state of the Russian majority of its population and the elite. A very large part of the population and the elite are the patriots of the USSR and Russia seen it as an unfortunate mistake. Another, not very big, but an influential part of the population and the elite is fully oriented to the West, to which Russia (and previously the Soviet Union) is also seen it as an unfortunate mistake. Especially not satisfied with the current Russian nationalist supporters of the various projects, both Russian and anti-Russian. As a result, the role of the formal Russian patriots serves mainly the current bureaucratic elite, which, in the fact, is focused primarily on the personal enrichment and gave birth to the major national problems mentioned above. If a country is, in the fact, no one wants, and then there is no one to create for the strategy.

Another reason for the lack of the strategy is the rapid drop in the level of the research and education in the country, and it started in the Soviet Union. An example is the Russian military science, which today, with rare exceptions, not only capable of the creating new concepts, but al-

most lost the ability even to analyze the foreign. Moreover, even the descriptive function of the military science is almost done (with the exception of a few technical issues). In fact, most of the works in the field of the military science in Russia do not have to do with science and propaganda. The level is quite low.

Given the emerging trends in education, the situation in this area will only get worse. However, the scientific institutions of the North Russia can refute these trends by developing a coherent and consistent strategy for the development of the Russian Arctic. The fact that its implementation will face a major national problems (corruption and bureaucracy), is no reason to not develop a strategy.

With regard to the document entitled "Strategy for the development of the Arctic zone of the Russian Federation and national security for the period up to 2020", which appeared in February from city, it is extremely difficult to consider strategy. Over the past few years in Russia, there was a set of the similar documents written " for all the good things against the bad things," without distinguishing the real priorities (priority if two dozen arranged in any order, so there is no priority at all) without the mechanisms and timing of the (formally they are, in fact – are not because of the extreme generality and vagueness of all the provisions and criteria) and the responsible persons. This document may not be the guiding and normative. There is a strong suspicion that after a year of it just no one will remember.

## **Climate**

This is the specific regional problem, which, however, concerns a very large part of the country. In fact, because of the cold climate of the gigantic proportions in Russia are largely virtual. This is particularly evident in the Asian part of the country, where almost the entire population and almost the entire economy is concentrated in a narrow strip along the border. If we consider the favorite author of the military theme, it may be noted that to the east of Lake Baikal, develops a tragic paradox. In the case of Chinese aggression in the formal Russian troops have a huge strategic depth to retreat (several thousand kilometers to the coast of the Arctic Ocean). In fact, there is no depth because of the almost complete absence of the north of the line of the BAM infrastructure and exceptionally adverse climatic conditions. Accordingly, the entire inhabited area is lost almost immediately without the possibility of the return, and the troops destined for a quick death.

On the other hand, complain about the climate is rather pointless, since it did not create man. The possibility of human influence on the climate is extremely limited, and this effect is almost always very negative for the individual. The place in the recent years, climate change in the

Arctic (and formally in the favorable direction) becomes less of a problem than the "traditional" climate that took place over the last few centuries. In the future, these changes can be a challenge to all of the humanity, considering how the Arctic affects the climate on a global scale, and the climate, in the turn, affects the state of the biosphere.

Thus, the climate is desirable to be taken for granted and look for the opportunities to use it for the constructive purposes. Otherwise, discuss the problems of the Arctic in the general meaning.

## Low population density

This problem is a direct consequence of the previous one, so the solution is not entirely dependent on the person. Moreover, it is hardly possible even enshrined in the Arctic at least of the population that already lives there.

Well known that in Moscow and other major Russian cities have the problem of "Siberian apartments". They bought the inhabitants of the northern and eastern regions of "the future", that is, to live in their retirement and / or for children, beginning with their college-age. They bought the inhabitants of the northern and eastern regions of "the future", that is, to live in their retirement and / or for children, beginning with their college-age. The demand for these apartments increases in the property prices in big cities, not only directly but also indirectly, since a large part of them is empty, ie, the output of the existing housing stock. As a rule, buyers of these apartments are the most affluent residents and equipped the northern regions such as Khanty-Mansiysk and Yamal. Thus, even very high by Russian standards, salaries and very good living and social conditions can not get people to connect their future with the North. Obviously, the main if not the only reason for this is the climate.

Apparently, this situation should be taken as a given. Scope for improving the living conditions for the economically active population in the Arctic, knowing that people are closer to retirement will still move "to the mainland". Also, it is desirable to somehow stimulate the return of young people in the North who have graduated from universities in the rest of Russia or abroad, and strengthen the local higher education. In the connection with this illusory submitted projects to create the North new "innovative cities". Such artificially imposed projects will absorb huge funds, which are notoriously never being repaid and will not solve any problems. It is much better to spend money to improve conditions in the existing settlements.

#### **Transport**

This issue is crucial for the Arctic, without any prospect of its solutions in the region not to continue its sluggish dying, except for oil and gas development. However, even their prospects are

not clear, given the "shale revolution" in the United States and other countries importing hydrocarbons. Saving at least the current settlements, not to mention the creation of the new cities, the exploitation of the current and the development of the new mineral deposits are not possible with the current state of the transport infrastructure, ie, its virtual absence.

In addition, Russia has huge theoretical transit potential, and for all the modes of the transport (air, sea and river, rail, truck). There should also be involved in the Arctic region. Some experts believe that Russia has already missed the chance to make use of this potential [1]. However, you must make an attempt to change the situation, the more so as it was ska shown above, it is necessary mainly for the domestic use.

First of all, we are talking about the development of SMEs. It should be as convenient for the commercial shipping (domestic and foreign) in the navigation, and in the economic terms. Apparently, you need a special law or series of the laws on the NSR. Must take into account the sad experience of the Trans entire transit potential is destroyed by the complexity of the procedures.

It is much more difficult, but necessary project is the construction of a railroad along the Arctic coast, which would be a "backup" of the NSR. In the short term (up to 2030), through the use of the existing sites, it is necessary to focus on the construction of the road Murmansk - Norilsk (Dudinka). Bring the road to Anadyr unlikely even by 2050 the more so in this way requires a minimum of four drainage to the south - chronically unfinished Belkomur not even started on the road to Krasnoyarsk and Norilsk from Tiksi and from Anadyr (via Magadan) to Yakutsk. However, the construction of these roads is needed. Of course, this is an extremely complex and very expensive project, but without all the talk about the development of the Arctic and the Far East are no more than demagogy. Moreover, considerable efforts and tightened claims to the territory of the United States and China, as Russia is ever more will act as a "dog in the manger" in the conditions of the increasing scarcity of the resources.

New transport infrastructure – is the only factor to not only fix for the Russian Arctic and the current city and the objects of the economy over the Arctic, but also create a new "points of growth" in the region.

## Military forces of the Russian Federation in the Arctic

The question of the possibility of a military confrontation in the Arctic, the author has considered the report of the Solovetsky Forum in 2011 [2]. It has been shown that the probability of such a confrontation is very low, but that it remained equally low, the Russian military capabilities in the region should be maintained at least at current levels.

Of course, the basis of the potential of the Northern Fleet, but it is, in the essence, not so much the Arctic as the Atlantic. Obviously, this situation will continue in the future. In addition, it performs the function of a national nuclear deterrent, which is not directly related to the defense of the Arctic. Apparently, you need to create all along the Arctic coast of Russia basing points of the Navy, but it is clear that the permanent naval groups in them will not be deployed. There simply are not enough resources. Especially as surface ships, designed for the action is in the Arctic should be reinforced hull, which would further strengthen the value of their construction. Thus now for Russia would be much more important to restore at least the "traditional" fleet than trying to build more and a special Arctic fleet.

It is therefore necessary accommodation along the Arctic coast of the Arctic 5-7 teams BC (potential points of the dislocation - the Kola Peninsula, the area of Arkhangelsk - Severodvinsk, Salekhard, and Yamal region, Norilsk, Dudinka, Tiksi, and Chukotka). Formally, this project has aready voiced by the Ministry of Defence, but so far, apparently, as long as it does not itself fully understands what it meant. Obviously, only for the teams on the Kola Peninsula and Chukotka will have at least the theoretical possibility of the participating in the combat operations on their territory defense. The remaining teams will carry more symbolic function, which, however, is very important. First, the abnormal situation will be resolved when the huge extent on the Arctic coast of Russia "open wide". Although the probability of it landing on the enemy troops close to zero, this does not mean that it should not be protected. Second, it will have taken an important politically symbolic gesture to secure the Arctic for Russia. Third, is that the military units themselves can become "points of growth", attracting population, economy and infrastructure.

In the addition to the Arctic brigades in the same paragraphs desirable placement of air defense forces, not only RTV, but also SMP and fighter aircraft. It would be anti-aircraft missile regiments of S-300P, consisting of 1-2 divisions, as well as groups (level 1-2) fighter-interceptor MiG-31 are deployed in the Arctic airfields on a rotating basis. Together with the Arctic brigades of ground forces that would be enough to ensure not only the military security of the Arctic region, but also it's political "fix" for Russia.

## **Conclusions**

The current development of the Russian Arctic de facto completely tied to the production of hydrocarbons. However, the extreme technical complexity of this process in the local climatic conditions, stringent the environmental requirements and unfavorable external conditions make such a policy is very doubtful. The basis of the Russian Arctic strategy should be, first, the development of transport infrastructure, and second, securing the region's economically active popula-

tion, and thirdly, strengthening the military capabilities in the region. Especially that without these things, after all, is no longer feasible production of the hydrocarbons.

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## О МЕТОДИКАХ ИНТЕГРАЛЬНОЙ ОЦЕНКИ ИННОВАЦИОННОГО ПОТЕНЦИАЛА РЕГИОНОВ СЕВЕРА И АРКТИКИ

## ABOUT THE METHODOLOGY OF THE INTEGRATED EVALUATION OF INNOVATIVE POTENTIAL AR-EAS OF THE NORTH REGIONS AND THE ARCTIC



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Аннотация. Проведен расчет интегральных показателей инновационного потенциала регионов Севера и Арктики по трем методикам. Уточнены их преимущества и недостатки. Определено, что наличие большого количества различных подходов и показателей оценки уровня инновационного потенциала территорий связано с неоднозначностью трактовки в России понятий, несовершенством системы статистических показателей и отсутствием необходимой информации. Показана необходимость дальнейшего совершенствования методологии интегральной оценки инновационной деятельности стран и регионов

**Ключевые слова**: инновационный потенциал, регион, Север, Арктика, интегральная оценка

Abstract. The calculation of the integrated indicators of the innovative potential of the regions of the North and the Arctic by three methods. Clarifies the advantages and disadvantages of each method presented. Determined that the presence of a large number of different approaches and indicators to measure the level of innovation potential areas due to the ambiguity in the interpretation of the concepts of Russia, imperfect system of the statistical indicators and the lack of necessary information. The necessity of the further development of the methodology of the integrated assessment of innovation countries and regions

**Keywords:** innovative potential, the region, the North, the Arctic, the integrated assessment

The assessment of the innovative potential of the regions of the North and the Arctic allows achieving the development of the standard models of the organizational, legal, technological

innovation formation process, taking into the account sectoral and regional specificities. Objective evaluation of the innovation capacity will consolidate on the innovative capability field enterprises, regional and federal authorities, as well as it will allow eliminating the resulting congestion in the use of thescientific and technical developments, inventions, know-how.

There are many definitions of the innovation potential:

- 1. Innovative potential is a collection of the different types of the resources required to implement innovations [1]. In this case, the structure of the innovation potential is defined as the unity of its three components: resources, internal and productive, which coexist mutually, suggest and cause each other and are shown using his triune nature.
- 2. The potential for the innovation is to mean the amount of the economic resources, which at any given society can be used for its development. These resources are distributed between the three main sectors (segments, lines) macrosystem: scientific, technical, educational, investment. The totality of these segments and generates innovative potential macro system [2].
- 3. The innovative potential of the regional socio-economic system is a set of the resource capabilities, technological, commercial, managerial skills to generate, disseminate and use innovations to modernize the economy of the region [3].

Meaning of the North and the Arctic in Russian's economic development is due mainly explored and prospective mineral resources located on its territory. It focused two thirds of the resource potential of the country, including more than half of the forest, fish, furs, diamonds mined 100%, 80% gold, more than 90% natural gas, 75% oil, which provide more than 60% of the foreign exchange earnings. There is about 8% of Russian's population, but produces about 20% of the gross domestic product [4].

In this paper, to assess the innovative capacity of the North and Arctic regions have been used three methods: 1) an innovative profile, 2) positioning of the region, and 3) clustering regions and consideration of three groups of indicators FIG. Methods of calculating the profile developed innovative OS Moskvina [5]. In accordance with this procedure, the estimated aggregated characteristics of the innovation potential (Table 1).

Table 1

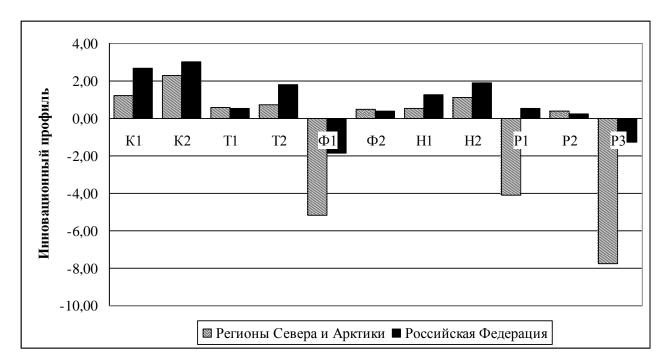
The system of the general indicators characterizing innovation potential

Group of Indica- tors	Indicator	Symbol index	Border characteristic of the indicator	
tors			R	Z
Manpower	proportion of workers with higher education in total	K1	0,25	0,8
component	employment,%			
	Number of the students in theeducational institutions		100	150
	of the higher education in the 10 thousand people			
technological	Depreciation of fixed assets,%	T1	60	25
component	Specific gravity completely depreciated assets as a%	T2	12	8
	of total fixed assets activity			
financial	Gross domestic expenditure on research and devel-	Ф1	2,5	5
component opment to GRP,%				
	Investments in fixed capital to GRP,%	Ф2	12	59
scientific	Number of personnel performing R & D by 10 thou-	H1	13	40
component	sand people. population			
	Number of the researchers with advanced degrees to	H2	0,4	4,0
	10 thousand people. population			
The result of the	P1	2,5	5	
companent	people. population			
	Innovative activity of organizations,%	P2	40	10
	The volume of innovative products, works and ser-	Р3	8	15
	vices in% of the total shipped goods, works, services			

The resulting general indicator of the potential graphically displayed in the form of the innovative profile of the North and Arctic regions (Fig. 1). The calculations allow identifying and ranking the most problematic factors for the complex innovative development of the northern regions and the Arctic.

Positive is basically personnel and the scientific components, as well as technical and technological. At the same time, despite the fact that in the recent years there is a constant increase in the share of the investment in the fixed assets to GRP (F2), their scientific component (F1) is in the area of the unsatisfactory state. In the personnel area swept gradual rise in the educational level of the workers (K1) due to the positive dynamics of the indicators characterizing training (K2).

Performance indicators in the area of the block are unsatisfactory condition. That is the innovative potential and as ability and readiness can be described as insufficient for the formation of the active innovation economy.



Pic. 1. Innovative profile of the North and Arctic regions

To implement this technique requires a number of the issues, including the choice of the indicators characterizing innovation potential, determine boundary characteristics selected indicators, the analysis of the regulatory and actual indicators. The disadvantage should be noted that its use is limited to the scope of a given region, and does not provide a comparative description of others. Based on a report E. Bykov and M. Youngster [6] has developed a system of the indicators characterizing the state of knowledge economy in the region in the evolving knowledge economy in Russia (Table 2).

Table 2
Scale for the positioning the North and the Arctic regions for the innovative development

Indicators	Categories	Indexes
incoming	Human resources	Number of personnel engaged in research and develop-
indicators		ment, per 10 thousand people
Expenditure		Number of the students in the educational institutions of
on innovation		the higher education per 10 thousand people
		Number of the researchers with advanced degrees per 10
		thousand people in the region
	Creation of	Gross domestic expenditure on the research and devel-
	Knowledge	opment as a% of VPP
	Transmission and	Innovative activity of organizations,%
	application of	The number of organizations engaged in research and de-
	knowledge	velopment in the total number of organizations in%

		Expenditure on technological innovation in the volume of innovative products, works and services,%
		The share of the organization used information and communication technologies in the total number of surveyed organizations
outgoing in- dicators	Yield market, intellectual property,	Technology exports as a% of the region's total exports to the regional
The result of Innovations	application of knowledge	Filed patent applications for personnel involved ments of research and development,%
		The share of the organization that had a web site, the total number of surveyed organizations,%
		The volume of innovative products, works and services as a percentage of the total volume of goods shipped, do the job, services

Potential value of each indicator (Ii) scored on a scale from 0 to unity in order to get rid of the dimension, and it is calculated as follows (1):  $I_i = \frac{x_i - x_{\min}}{x_{\max} - x_{\min}}$  (1), where xi – is the actual value of the indicator in the i-th year; xmax (min) maximum (minimum) value of the indicator in the i-th year. Final regional innovation index is calculated as the average ratings of all indicators (2):

$$\sum_{i=1}^{n} I_{i}$$

n where n – is the number of the indicators included in the SII. Thus, all the indicators included in the index with the same weights.

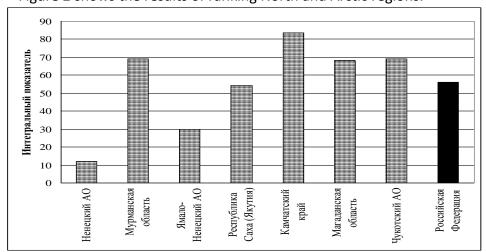


Figure 2 shows the results of ranking North and Arctic regions.

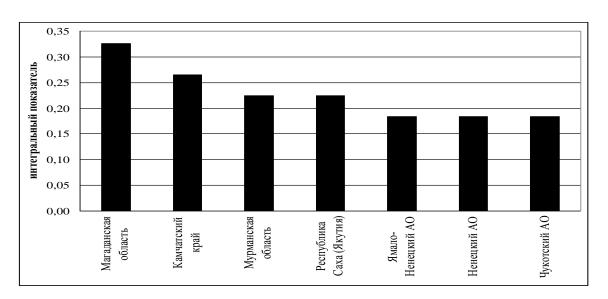
Pic. 2. Integral indicators of the innovative development and positioning the North and the Arctic regions

Technique based positioning indices obtained the primary indicators and has its advantages and disadvantages. The advantages include the relative ease of the calculation: index build innovative capacity does not require the complex and time-consuming work, and the amount

of the required statistical data is limited to one year. In addition, the Innovation Index reveals disparities in the development of the innovation territorial entities, as estimated set of both incoming and outgoing indicators.

However, the technique has certain disadvantages because of its analytical possibilities are limited only by comparison between regions within the same year. With the index difficult to identify long-term trends in the innovative development or make a prediction, and determine why some regions are more successful in the creating innovation than others.

On the basis of [7] assessed the innovative capacity and the classification of the North and Arctic regions of Russia in the terms of the innovative capacity. For an integrated assessment of all selected indicators used the method scores. Entering the region in the first group-specific Metrics is worth 3 points, the second - 2, in the third - 1. When calculating the integral index (average score) estimates were made with the same densities, ie assumed equivalence of their impact on the innovative capacity of the region. The result is a cumulative assessment of the innovative potential of the regions of the North and the Arctic of the method based on clustering of the regions and considering three groups of the indicators RIS (Fig. 3).



Pic. 3. Integral assessment of the innovative potential of the regions of the North and the Arctic

Clustering technique and regions considering three groups of indicators RIS has its advantages and disadvantages. Disadvantages methods: 1) the ranking of the North and Arctic regions in three groups performed on the basis of the performance indicators, which are defined by experts; 2) the calculation of the integral index of all estimates are taken from the same densities. Advantages of the technique: simple calculations.

The large number of the different approaches and indicators to measure the level of innovation potential areas associated primarily with the ambiguity tractor reparation in Russia con-

cepts not only "innovation potential", but "innovation", "innovation activities", "regional innovation system" etc. This is due to the lack of the federal regulations "On Innovations and Innovation", "On state support of innovation activity in the Russian Federation", and, consequently, legislated basic terms of the innovation policy. Necessary legislative generalization and refinement of the conceptual apparatus in the innovational field and convergence of the common terms in Russia and abroad.

In addition, measurement of the innovation potential due to imperfection of the statistical indicators and the lack of adequate information. For objective assessment of the innovative potential of the North and Arctic regions further research is needed in the direction of improving the methodology.

Improving research methodology innovation sphere is an incentive to the development of the international standards of the innovation statistics. However, the foreign researchers have noted deficiencies in the current system for the collecting statistical information at the national and regional levels [6].

Misrepresentation also occurs at the level of the individual firm, due to certain requirements for the accounting standards and taxation system that does not promote reflection of intangible assets of the firm, their accounting and management. Despite the fact that the international accounting system provide great opportunities on intangible assets as compared to Russian norms, leading financial advisors developed countries point to the urgent need to revise the standards for the provision of information on intangible assets, both within the firm and the capital markets [8].

Necessary to ensure the development of the innovative development of the statistics. A similar conclusion is drawn in the "Strategy for the Development of Science and Innovation in the Russian Federation for the period till 2015" [9]. Basic guidelines for ensuring the development of the statistical indicators in the field of the science and innovations:

- Analysis of the state-level implementation of the priority directions of the science, technology and engineering.
- 2. Analyze the state-level development and use of the logistical and experimental base of science, including an assessment of the availability and the technical level of the costly machinery and equipment, the age structure of the technical equipment, condition and use of the pilot plants, the development of the forms of the collective use of the scientific equipment, availability and use of land, unique research facilities, buildings.

- 3. Establishing a system evaluation and monitoring business performance industry, including the harmonized system of the statistical indicators comparable with accepted international practice, tools statistical observations and recommendations on the implementation of the assessment procedures in the practice of the business and government.
- 4. Development of the methodology and organization of the monitoring creation and the use of the critical technologies, including formation of the critical technologies and classification of the products (services) produced using them, scorecards, and survey instruments.
- 5. The formation of a statistical observation of the development of the internal market for technology (involving research and development results in the economic cycle, the development of a license exchange, etc.).
- 6. Updated program of the statistical surveys of the innovation in the coordination with leading international organizations, the next round of European innovation surveys, which will expand the existing framework for quantitative and qualitative measurement of the innovation processes in the several areas related to coverage of a wider range of the innovations (including marketing and organizational), the structuring of the innovation enterprises by the type of the innovation, research and cooperative ties, etc.
- 7. Development of the methodology and organization of the monitoring innovation infrastructure, including an assessment of the resource base and the effectiveness of the activities related to the commercialization of the results of the research and development, the provision of other services of an intellectual nature, based on a combination of the statistical reporting and one-time surveys (including the sample).
- 8. Development of the methodological approaches to measuring venture capital, taking into account the various forms of the venture capital financing, the assessment of the structure of assets and venture capital funds, uses of funds, including supporting innovative projects and companies in the early stages.
- 9. The organization of the monitoring of the small business innovation (through the creation of the systems for the collecting, processing and the presentation of the statistical information that adequately reflects the main trends in the development of the innovative activity of small enterprises), which should aim to provide for the formation of thpanels of the most active in the terms of the innovative small businesses with sustainable partnerships in this sphere, using both statistical and sociological tools for in-depth analysis of the results of their innovation.

- 10. Statistical analysis of the innovation clusters, including the analysis of the development of the existing clusters (in particular, special economic zones and science cities) and the identification of the areas with substantial scientific and technical potential and innovative in the terms of opportunities to reach global markets high-tech products.
- 11. Development of the methodology and organization of the statistical observation of the production and sale of high-tech products (including exports). Particular attention should be given to methods of assessing knowledge-intensive economic activities, products (services) and group them into relevant categories (high, medium, low-tech).

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## ГУМАНИЗАЦИЯ «РЕГИОНАЛЬНОЙ НАУКИ» («REGIONAL SCIENCE»): СОЦИАЛЬНОЕ ЗДОРОВЬЕ НА ЕВРОПЕЙСКОМ СЕВЕРЕ

#### **HUMANISATION OF THE REGIONAL SCIENCE: SOCIAL HEALTH OF THE EUROPEAN NORTH**



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Аннотация. Статья является проекцией социально-экологической методологии на изучение социального здоровья городских сообществ на Русском Севере. Регионология Севера понимается авторами как наука изучения городских сообществ Арктики. Ноосферогенез является тем научным подходом, который может положительно решить вопросы освоения Севера.

**Ключевые слова**: городские сообщества (хабитаты), гуманистическая концепция, регионология, социальная экология, социальное здоровье, экосоциализм

Abstract. Given clause (article) is a projection of the social - ecological methodology to studying of the social health of the city communities in the Russian North. Regional science the North by the author is understood as a science of the studying of the city communities of the Arctic regions. Noospheres are that scientific approach which can positively solve questions of the development of the North.

**Keywords**: city communities, the humanistic concept, regionology, social ecology, social health, eco-socialism.

Over the past 20 years as a result of the disintegration of the country and the ensuing economic reforms, Russia (USSR), according to experts, has lost about 28.3 million people (total de-

mographic losses ) [1]. This exceeds the population losses of the USSR in the Great Patriotic War (26.6 million people) [2, p.3]. Of course, the whole population estimates questionable because they bear the stamp of the political preferences and different ideologies. For example, data and Colonel-General G. F. Krivosheeva criticized. In this paper we are not interested in the absolute values of the losses and we do not intend to hold a discussion on this matter. We are interested in the cause of Russian's demographic catastrophe.

Extraordinary researcher Professor I. A. Gundarov not share the views of the vulgar economic noting the tradition of the modern demographers in Russia to produce population projections based on the dependence of health and life expectancy "of the economic well-being" - is another paradigm - "the law of the spiritual health of determination" [3, p. 123-124]. He refers to a historical fact, when the Soviet Union in 1943 there has been a sudden decrease in morbidity and mortality among the Soviet people, surviving until the end of the war. Another trend, according to the scientist, observed in other belligerent countries where mortality, unlike the Soviet Union, has increased everywhere: " ... in the Netherlands, it has grown by 28% in France to 15% in Belgium to 14% in England 6 % in Norway and Germany by 3%". And despite the fact that in the USSR in 1943 compared with 1940, the food production significantly decreased and the turnover decreased by 68%. Gundarov believes that such "force was improving energy of hope, born the battle of Stalingrad, the fair will to achieve victory over the terrible enemy, the desire to serve the Fatherland to save him". On the other hand, after 1964 in the USSR trend of deteriorating health and increased mortality on the "background of the continuous improvement of living standards". I. A. Gundarov argues that "alcoholism, smoking and environmental troubles are not significant factors in the sharp rise in mortality" [4]. The decisive factor, based on the analysis of the statistics and other data for the last 100 years, Gundarov calls spiritual trouble (feeling of hopelessness, worthlessness, loss of meaning in the life.) For a reference point today demographic crisis in Russia, "he took a wealthy 60 - ies of the last century. I.A. Gundarov as Nicholas Eberstadt American scientist has consistently rejected the traditional risk factors, and cause high mortality scientist offers to seek "in the growth of the spiritual distress" [5]. He shows that in the USSR for 1965-1980 years, the Kill levels rose by 80 %, 60% of suicides, and divorces by 130%.

To some extent, I. A. Gundarov in their judgments close to the point of the view of the contemporary Russian nationalist Neo-Eurasians S. Kara - Murza, who in his new book, "Dismantling people" writes: "Citizens, who receives no loss of the state, economic and cultural independence Russia, make up the vast majority of the population. But it is split and not organized our nation. has been "removed" broken up during the reform years. However, a community of the citizens

having the features of the Russian sovereign nation may be revived in the short term [6]. I. A. Gundarov by spirituality in a secular understanding of the consciousness involves the activities aimed at the search for the meaning of life and their place in it [7].

Currently in the West fashionable hypothesis of James Fowler and Nicholas Christakis. Its essence is that social networks can be used to detect any spread of the epidemics: from innovative ideas to a socially dangerous behavior or viruses [8]. Principally in the theoretical terms it contains nothing fresh, because for us, social hygienists, there is nothing new in the fact that the environment is not only surrounds, but also forms person, sculpts her own image and likeness, whether we like it or not.

We firmly believe that "our freedom of choice - is an illusion", which can be explained by social ties. In this context, one of the most important contemporary international instruments that must be considered when developing strategies for the social development of the country and its regions, a strategy of the social cohesion [9]. Revised Strategy for Social Cohesion dates back to 2004 and, as its name implies, is a new version of the original strategy, adopted in 2000, authors of the concept came from the fact that the idea of the social cohesion are relevant today, and was derived definition of the Council of Europe: "Social cohesion - is the ability of the society to ensure the welfare of all its members, minimizing disparities and avoiding marginalization". We closer second definition of the term, when "social cohesion ... creates a strong social ties and members of the public with the consent of their joint responsibilities ..."[9]. The idea of the social cohesion is seen as a "common approach that combines social factors with the factors of the economy, politics and culture". Argues that policy needs such a broad (but not vague) social approach that can serve as a vision or end point in relation to the social problems [9].

In this regard, pointedly about the fate of our country may indicate data on the components of the social health, including depopulation. Respectively, our state and society must raise, strengthen the "social cohesion" of Russian society as a strategy for the social security and quality of life. In a formal sense, it is output to the Russian standards of quality of life and well-being of developed countries where the minimum target benchmarks are two indicators. First, a general indicator of the standard of living - GDP per capita in purchasing power parity should be increased from 13.7 thousand U.S. dollars (2006) to \$ 30 thousand in 2020 and about 50 thousand dollars in 2030. Secondly, the average life expectancy (LE estimated) in 2020 is expected to increase to 75 yearsInterestingly, in 2010 life expectancy in Russia has the same level of lag in 12-16 years from the U.S. and the "old" European Union (EU), as it was in Tsarist Russia in 1900 [10]. Noteworthy in this connection that in 1965 the RSFSR the gap was only 2-3 years. In the period 1991-2010, mean-

ing of the life expectancy in Russia, Ukraine, Belarus and Kazakhstan decreased by 3-5 years. At the same time, in the "new" EU countries in the period 1991-2010. L.E. value grew steadily, reaching 75 years, and became 4.5 years more than in Belarus, and in 6 years more than in Russia, Ukraine and Kazakhstan. Naturally mortality in Russia tends to decrease. But in comparison to other countries it is a multiple of the above: in Russia in 2010, the overall mortality rate (CMR) 1430 totaled 100 thousand people in Italy - 511.6, Israel and Sweden - 533.4 in Norway - 549, Belgium - 635 and U.S. - 642, respectively [11, 12].

The view of the scientific independence regionology remains the controversial and unresolved until the end. Along with the major work "Sociology regional transformations" [13] is very useful in understanding the history of the northern Russian community should recognize the book of T. I Troshina "From Peter the Great to Stalin" [14]. The main advantage of this monograph is it's the cessibility for the interdisciplinary discussion. Contents of the book indicate an unwillingness to follow well-established website myths. Naturally, that this interesting work stands controversial propositions and conclusions.

The problem of "the great redistribution" certainly defines a new surge of the interest to sociologists, philosophers and social regional specialistds [15]. Became the subject of the Arctic, the geopolitical theme. Obviously, a professor of human Y. F. Lukin, believes that the problem of the scientific research of the northern communities still rests on the conceptual apparatus and positioning regionology as "interdisciplinary Mega science" of the regions [16, 17]. The scientist believes that regional approach is needed, on the one hand, to obtain holistic knowledge, and on the other, for a full simulation practice. Thus, he assigns regionology, as the "key role in developing the Arctic socio-humanitarian knowledge paradigm" based on an interdisciplinary synthesis of all spheres of life. Single object explores the northern regionology. He speaks about Russian Arctic. It is unclear, however, that is the so-called regionological methodically approach allows us to "get a complete system of knowledge, gender-fledged model for the practice". In the other work of Y. F. Lukin, standing on the platform of the philosophical understanding of the social phobia, the Arctic is "uncharted ground, little known and understood by the modern man" [18]. What and how in this case will help regionology? Indeed, a major health and environmental stressor in the North as in the duration and intensity acts cold. And in this regard by the northerner's krio phobia naturally reckoned not just to phobias and the social problems.

At the same time, it is well known that the most prevalent krio phobia and health consequences of low temperatures dwellings of the poor England and Israel, It is clearly, they are not Nordic. Phobias are not something purely regional – is the northern phenomenon. Thus, Giddens

averted the risks created by humans, a significant role in the construction of the modern world [19]. Ulrich Beck defines the risk, perhaps as a result of the systematic interaction of the society with the threats and dangers [20].

Hygienic scientific knowledge about the interaction of the natural stressors certainly suggest only one thing: in the techno sphere (modern Habitat) natural factors, for the most part, do not interact with the person directly and in isolation, is the style of their lifestyle, about the stere-otypical life. They are combined with the technological and the social risk factors stochastically regulate frequency in the human population's imbalance of the immune mechanisms [22]. Secondary immuno deficiencies underlie many human diseases, both infectious and noninfectious, including cancer.

For many decades we have found the attraction of high frequency (probability) of the primary morbidity of the children in the Arkhangelsk region, Novodvinsk, Koryazhma, Arkhangelsk and Severodvinsk. In the most cases, this pattern is confirmed in the official long-term data [23]. This fact holds for the most classes of the diseases. This statement is true with respect to the class of the pathology of the pregnancy, childbirth and the postpartum period, for the official statistics to areas at the risk of (2003-2007.) They were classified in Koryazhma - 36.1 1000 and Novodvinsk - 44.0 on 1000.

In the statistical studies of other authors and using different methods, it was confirmed that most poor children's health again has been found in the single-industry cities (Novodvinsk, Korjazhma) in the environment which is more risk factors (RF), the stressors of the different nature [24]. One can not ignore that the "cold" causal factor here appears sufficient cause of morbidity (the reason inevitably leads to the morbidity of the population), which has a removable components. Social measures should regulate seasonal and daily temperature extremes, low temperatures (<20-25 °C), vertical and horizontal temperature gradients ( >2°C), cold floors and walls of residential buildings in the children's educational institutions. At the same time, the effect of the environmental factors with an intensity exceeding the limits of the "optimum zone" should be regarded as pollution of the human environment [25, 26, and 27].

D. S. Pavlov and G. A. Sofronov explore remote medical effects of the chemical pollution of the areas (Agent Orange) in Vietnam, proved nonspecific and non-linear nature of this interaction [28]. Scientists concluded that the final conclusion about the dangers of the certain ecological, toxicological stress expedient to form, taking into account population and individual changes in the ecological systems. In the context of the concept of the regional social security, it is important that the authors use the term "eco toxicological factor", which can be equated to multicomponent suf-

ficient reason morbidity. This reflects a general sense of the social and environmental methodology and need not linear and systems thinking in the analysis of the integral quality indicators of the social life. This requires a "multidisciplinary approach" in the sociology - Integrative sociology.

The Northern Russian ethnic groups have historically been formed, according to T. I. Troshina, the streams of the southern Russian (Slavic) colonists. Russian population in the northern Russian evolved in very special circumstances, where the influence of the climatic factors was particularly noticeable. The main feature of Russian life in the vast expanses of the North author considers their isolation, including economic. Specifically, the differences in the structure of the mortality author objectively explained by the social, rather than climatic factors. And quite naturally, these provisions are an additional confirmation of the distribution among the women of European North. Phenomenon, which the author claims to significantly less common in the agricultural and fishing areas than in the half agricultural, where the share of the female population, according to the author, have got hard life and hard labor. In this regard, it is difficult to agree with the conclusion of Troshina that "the whole Russian population of the North was fairly healthy physical and mental attitude and had a very high percentage of older people" [14]. T. I. Troshina noted that in the Arkhangelsk region with the average life expectancy was very low because of the high infant and child mortality. The predominance of the female deaths aged 20-35 historianethnographer explains the frequent pregnancies and childbirth. Increasing the level of male mortality in the age range of 30-40 years, she connects with injuries on fisheries and manufacturing, as well as drinking bouts, traditionally among the fishing population, refocuses on factory work.

Early last century, Mendeleev wrote that "the Russian people began to seek in large numbers in the city" [29]. Today in the Russian Arctic population lives mainly in the urban settlements and industrial centers (Arkhangelsk, Murmansk, Severodvinsk, Norilsk etc.). Regionology in this regard may be found in other approval of Professor Y. F. Lukin that is an interdisciplinary science of the regional societies [30]. Based on this promise, in the realities of the modern European (Russian) north as an object of the science should be considered regionology urban communities, Northern Habitat.

Gumilev saw the problem of the ethno genesis on the intersection of the science: history, landscape studies, biological ecology and genetics. He did not share the view of a single ancestor ethnicity and believed that a systematic approach can be considered as a system of the ethnicity: "Ethnicity – is not just a crowd of people ... and the system for the various tastes and abilities, personalities, products of their activity, traditions, accommodating geographical environment, the ethnic environment, as well as certain trends in the development of the dominant system" [31].

The concept of the ethno-demographic balance of the North with the nursing landscape created by K. P. Ivanov and S. Khrushchev. The ethnicity, in their opinion, is the original form of adaptation of the different human communities, manifested as a "pattern of behavior to its biocenosis" feeding "landscape" [32]. Eco sphere if perceived as athnotzenoz, where backbone imperative acts trophic relationship community. We call attention to the fact that the inhabitants of the modern northern cities are not connected with the man-made landscape trophic (Habit) North and the Arctic, and it is obvious that in this context the term of the "northern people (nordmen)" is no more than a metaphor! Paradoxically, the population of the Murmansk region in fully furnished dairy products than those in the Arkhangelsk region, where a very low per capita consumption of milk can be considered as a health and environmental risk factor, one possible component of the sufficient causes of the disease.

But more likely, in the relation to our topic that regionology - is "severologiya" ie "extra schience motivation" [33]. Today this trend prevails in the Russian education: "science-assemblies" (general subject area and methodological arsenal) are giving way to the "science-conglomerates". Convergence is caused by the fashion or the "social order". Moreover, in the heart of the issue "severologiya", Russian Arctic geopolitics clearly defined and the forthcoming development of hydrocarbon resources in the Arctic shelves. This paradigm clearly leads to a deadlock of the social development of the North and the Arctic. In the end, we can agree with the metaphor of Professor E. V. Kudryashova [34] and the Arctic as a large common house of Russia and other countries. But in this case, the term "home" allows us to move freely to the environmental methodology, considering the actual methodology of the social ecology "Regional Studies".

The more problems of the education, production and culture of the country will be delayed, the more expensive it will cost to the society [36, p.21-23]. We agree with the author about the need for the social ecology in the list of the major scientific disciplines (list WAC), the development of the model courses for the regional universities roses, supporting all kinds of the public education initiatives of O. V. Aksenov. He goes further and says that "eco socialism (neo-Marxism)" assumes the anthropo centrism, a man, his well-being and the development are the main purpose of the conversion of the medium [37]. Peculiar, but it is not justified that NArFU no appropriate department, or even laboratory...

In conclusion we note that the last two decades in Russia has worsened the health status of the population, which is reflected in the increasing incidence [38]. Incidence is steadily increasing, despite the decline in the mortality rates. The level of the overall morbidity of the Russian population has increased significantly since 1995, but not the same in the different age groups: 70.1 % of

the children, 51.8% of the adults and 2 times among the adolescents. On the background of the extremely high mortality and short life expectancy of the citizens of our country, this fact may indicate inefficiency of the social interventions in the social health. At the same time the most sensitive indicator reflecting environmental and social well-being, is the health of the children. In children, long-term residents in the areas with environmental tensions of the reliable frequently recorded three or more chronic diseases per patient. Factors higher suicide risk in the Komi Republic in the comparison with the average of Russian by V. M. Terebihin [39]. As a predictor of the suicidal behavior of it indicates a higher level of alcoholism. Degree of alcoholism population, primarily students, apparently reflects the complex relationship mechanisms of the socio-cultural reproduction mass deviance [40]. But the socio-cultural feature is little conscious regionology due perhaps their methodological limitations.

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#### **HISTORICAL SCIENCES**

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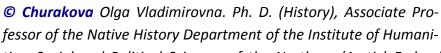
# «ЗЛОХИТРЕВА ЖЕНА» «ОКАЯННАЯ МАРФА»: МИФЫ И ИСТОРИЧЕСКИЕ ИСТОЧНИКИ О РОЛИ МАРФЫ БОРЕЦКОЙ В ПОЛИТИЧЕСКОЙ БОРЬБЕ МОСКВЫ И НОВГОРОДА И ОСНОВАНИИ СЕВЕРНЫХ МОНАСТЫРЕЙ

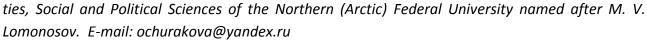
'EVIL-CUNNING WIFE', 'DAMNED MARFA': MYTHS AND HISTORICAL SOURCES ABOUT THE ROLE
OF MARFA BORETSKAYA IN THE POLITICAL STRUGGLE OF MOSCOW AND NOVGOROD AND IN
THE OUTDATION OF THE NORTHERN MONASTERIES

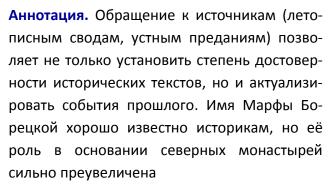


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**Ключевые слова:** Север, политическая борьба, монастырская колонизация, гендерные роли, личность в истории, альтернативы исторического развития

**Abstract.** Examination of the sources (annalistic codes, verbal folklore) not only allows us to determine the reliability of the historical texts, but also helps us to actualize the events of the past. Marfa Boretskaya's name is well-known by the historians, but as sources indicate, the role in the foundation of the northern monasteries is grossly exaggerated.

**Keywords:** The North, political struggle, monastic colonisation, gender roles, personality in history, alternatives of historical progress

The information space of the North at the beginning of the XXI century means that the accuracy is very important in the transmission of the historical facts. Meanwhile, local lore and popu-

lar history books, the pages of the guidebooks and websites of the travel agencies, sightseeing in the practice often sound legends and myths, long research. Undoubtedly mythologies in the historical memory of the people play a fundamental role. Historical memory as a kind of the collective (or social) memory and is transmitted from generation to generation historical texts - a reflection on the events of the past, very often fixed in the form of the myths. To understand what really happened with the legendary figures of the past in the sacred periods for the development of the state, a more critical approach to the interpretation of such unique sources as assembly material chronicles and oral traditions.

One of the "nodal points" of the past, understanding which is very important for the citizens of the Russian society, is the period of the formation of the Moscow kingdom (the second half of the XV century). For the first time in Russian's state policy of the "hand of the Kremlin" severely punish "not submissive" – North-West Territories, trying to lead an independent "European" policy. It is interesting that, contrary to the stereotype perception of the medieval Russians as "the prisons hermit" in the fight against the dictates of Moscow actively involved women. The most famous of them, "Governor's Wife" Martha Boretskaya, which is known by the fact that her name is associated with the northern monasteries: Solovetsky, Nicholas Korelskogo etc.

But is it really? What role did the rebellious Novgorodian noble woman in the history of the foundation of the monastery, in the political struggle for the northern territory? Try again to the historical sources and research.

In the history of the North of the XV century marked not only the era of confrontation between Moscow, already united by the time most of the north-eastern Russian principalities and "Lord Novgorod the Great". It is also a period of active "monastic" development "of continental margins. North vain dubbed Russian Fivaida - Orthodox monastery appeared in these places during the disintegration of the Russian lands. Originally a monk came to the North in two ways: from the center of Russia (Rostov-Suzdal, then Moscow lands) and Novgorod the Great. But if in the XII-XIII centuries "the estates, werenot drawn into the trade and economic activity" the northern monasteries "focused on liturgical and missionary activity" [11, p. 51], in the XIV-XV centuries, many mansions become patrimonial, centers of the economy and trade, and are involved in a political struggle between Moscow and the freedom of Novgorod the Great. However, as the researchers believe that it would be wrong to see in the waves of the monastery foundation analogues political struggle for the influence over the local population. "In the historical literature can often find the allegation those Moscow metropolitans in this period a political order of their princes and archbishops of Novgorod - boyars. And because of the dispensation of the monasteries of

XIV-XV centuries, discernible primarily political motives, as well as a confrontation between two chairs in the distribution of the "spheres of the influencein the North", - said Alexander Kamkin. Reputable scientists believe that "it was much more difficult. The church is known to have their own, individual tasks not directly related to the political preferences of a particular era. Moreover, in the terms of the feudal disunity it - because of the canonical and dogmatic principles - remained ultimately a single organization. Relative autonomy and independence of Novgorod department did not take it from the local church of a single organism. And therefore the establishment of monasteries in thevarious places of the North blesses various church centers, meant self-development and the further statement here united Orthodox Church" [11, p. 52-53]. Probably, in the XV century more meaningful to the monasteries was a struggle for the economic impact: the ownership of land, fishing grounds, and manpower. And so along with missionary activity monasteries had to conduct "diplomatic"and sometimes armed struggle against those who previously owned that territory on which the monasteries. A striking example of such a battle for the survival is a story of the foundation of Spaso-Preobrazhensky Solovetsky monastery in the White Sea.

The second half of the XV century – is an important stage in the life of the Solovetsky Monastery: this time, one of the first inhabitants of the Solovki Abbot Zosima received official recognition of the status of the monastery for previously based on the Solovetsky Islands monastery. Ratification monastery gave Jonah Archbishop of Novgorod. But most often associated with the improvement of the monastery estate widow Martha Boretskaya Novgorod mayor allegedly conceded monastery own land. Is this true? Perhaps her name is the solid historiographical fiction, isn't it?

Indeed, the extraordinary personality Martha Posadnitsa attracted the attention of many authors' chroniclers, writers, historians and ethnographers [16, p. 154-174, 30, 25]. Three times the author turned to the image of the heroine of the Nizhny Novgorod: The works of "Martha Governor's Wife, or the subjugation Novagorod" (1802), "The news of the Governor's Wife Martha, taken from the life of St. Zosima" (1803) and in the monumental work "The History of the Russian State" (that was released in 1818). N. M. Karamzin acknowledged that "from the fairy tales, songs and legends, the writer-sentimentalist, created a vivid image of the rebellious Posadnitsa that subsequent historical literature, her image became a symbol, is inextricably linked with the fate of the doomed Veliky Novgorod. Paucity of the historical data on Martha compensated the author's fantasies, speculations, and instead of a biography specific person turned a beautiful legend.

N. Karamzin compared Martha Posadnitsa with the leader of the Republican Party in Ancient Rome Cato and expressed the hope that her name will be inscribed in the gallery of the famous Russians [13, p. 249]. In the XIX century, Martha got the name on the pages of the historical and of the literary publications. Solovyov wrote that "Martha had a strong authority over children by the custom and personal character and power enjoyed by this powerful influence on the affairs of his native city" [30, p.127]. Insisted on the consept of p Moscow: "Mercenaries Boretskaya was at the square, screaming about the oppression of Moscow...". Interesting, that the "Westerner" Solovyov Martha condemned and opposed by Ivan III, "all surrounded by the majesty of the truth" [31, p. 85-86]. Kinda opinion was expressed at the same time by historian D. I. Ilovaiskii: "Nothing indicates domestic decline in Veliky Novgorod, as a complete lack of men who have moved into the era of their talents and the civic virtues ... In the most critical time of its history in the foreground is a woman who has the energy for the cause of Novgorod identity over the modern Novgorod "[10, p. 389-390]. Not paid attention to the image of Martha in the "thick journals", social thought of the "golden age" of Russian culture: stories, "historical drama in the verse" and essays about her were published in the "Russian antiquity", "Notes of the Fatherland", "Journal of the Ministry of Education", "Moscow Telegraph", "Northern Bee". A new round of fame began after the creation of Boretskaya after the sculptor Mikhail Mikeshin in the monument "Millennium of Russia". Pictured on the monument image Martha initiated visualization legendary of Novgorod Governor's Wife. According to the Soviet historian and philologist J. Lurie, "the image of Martha Posadnitsa became perhaps the most important political figure of Novgorod on the eve of its fall" [22, p. 628-629].

Soviet historiography could not actively pursue the theme of the confrontation of Moscow margins and monastic colonization, but reinforced our knowledge of Martha Posadnitsa archival sources. Boyarsky tenure in the North was devoted to the books and dissertations, including documents, which were studied by Boyar Boretsky patrimony and land ownership in the monastery in Novgorod in the domoskovsky period [32, 34]. Applied to the image of Martha Posadnitsa, the researchers of the women's history, but most of all the attention paid the portraits of famous Russians in their works of N. L. Pushkarev, now a recognized leader historians — the researchers "female threads" [28, p. 490].

Expressed interest to a woman in the foreign Genderology legend. They attempt to deal with those where there is the true legend of Martha and its events and fiction [1]. But doing this is difficult. After the fall of Novgorod, the Novgorod boyars destroyed many archives, including Boretsky, but because no one knows when and where she was born. For example, there are two

points of the view on any of the boyar family occurred legendary woman. According to the most researchers, historians and authors of the articles in the encyclopedias and the reference books, Martha descended from Novgorod boyars Loshinskih [27, p. 52]. Prof. V. S. Ikonnikov at the time argued that the fact that in the annals of the son of Martha, Fedor Boretskii named "sestrichem" - Ivan Loshin [3, p. 214].

According to another version, as proposed in the XIX century. Arkhangelsk regional specialist M. Zarinsk thought, that Martha was a kind of the boyars Viremskih, who owned the freedom, located 15 miles from Sumy church yard towards the town of Kemi, where on the seashore and the river was a village Virma. In the Solovetsky Monastery "in Novgorod the daughter Martha Isakova Viremskih" written under the general heading. Assuming that Martha came from this kind, it could be by her father Michael Viremsky [21]. Belonging to the boyars Viremskim confirmed part of their contribution to Martha land on the river in Sume Solovetsky monastery. As for naming Synodikon Martha, who was his daughter, not his wife Boretskiy Isaka, it can be explained by the old Russian custom dignify the names of the wives and widows of their husbands [14, p. 31].

Preserved the mention of Nicholas Korelskaya monastery on this village, on the torso, and reap Kudma in Nyonoksa. In this literacy mentioned that Martha and her brother-in-law G. Theodore, son Afromey Vasilevich, abbot of Novgorod Saviour Monastery Khutynsky Basil. The abbot's document date from the beginning of XV century. There is also an earlier bill of sale Philip G. on grounds mentioned in the deed of Martha [23, p. 18]. Based on these documents prerevolutionary historians identified depositor of Marfa Posadnitsa and, accordingly, called Philip G. first and Isaka Boretskiy second husband of Martha. However, arithmetic calculations make it unlikely that this version. In the 70-ies of XV century, Governor's Wife Martha had two sons (Dmitry and Fedor) and grandson Vasily Fedorovich Boretskiy. Consequently, it is necessary to agree with the researchers prove the innocence of Martha Boretskaya to the base of the monastery of St. Nicholas Korelskogo [21, p. 31-32].

Equally contradictory information about the participation of Martha Boretskaya in the political activity. The first information about her activities, the historians gathered from the chronicles. Interesting, that in the Novgorod chronicles, the name Martha is not mentioned. The record of Boretsky record can be found in "Chronicle Dvina" [33].

Subjects related to the participation in the political life of Boretsky Novgorod appeared in the chronicles lists already recycled in Moscow, and because of the assessment acts Martha and her supporters are very partial [20, p. 115]. For example, the Moscow editors in "The Tale of Ivan campaign against Novgorod" spared no unflattering epithets Boretskaya address ("damned Mar-

tha," "evil snake", "zlohitreva wife", etc.) [25, p. 376-396]. The reason for the accusations against the mayor's widow became her anti moskow policy, the desire to get closer to the western lands. The reason for the accusations against the mayor's widow became her anti moskow policy, the desire to get closer to the western lands. In the source, it is a fictional presentation of the negotiations of Martha Boretskaya and "fellow workers"- Pimen (Novgorod Bishop Jonah and the pretender to the archbishop) Lithuanian Prince Michael (cousin of Ivan III, Prince Michael Olelkovich suspected of having links with the Polish-Lithuanian king). Lyricist compares «zlohitrivu wife» "Martha Isakova Boretskiy", ancient Jezebel "demon Herodias" Queen Eudoxia, sharpened John Chrysostom, "accursed" Delilah. More colorful filed this story in a fragment of Moscow Grand Chronicle, which may be considered as a separate monument of Moscow journalism of the XV century, - "A Word from the holy scriptures Select & righteousness and media". In the source, Martha is accused of conspiring with Prince Michael Olelkovich. She attributed the desire to "withdraw" from Novgorod Grand Prince of Moscow, and for that to marry Lithuanian nobleman and with it own on behalf of the King of Poland and Grand Duke of Lithuania Casimir IV the Jagiellonian Dynasty "Novgorod land". "Martha wanted to marry and to get Novogorodskiy Land". These chroniclers debunked the speculation of Moscow Russia and the Soviet historians (G. Vernadsky, Y. G. Alekseev, and R. G. Skrynnikov etc.). George Vernadsky, for example, believed that this "sound absurd, because Martha was an elderly woman. At this time Martha was probably 65 years old, if not more" [6, p.2]. Indeed, the husband of Martha - Isaac Boretskii died in 1459.

In addition, Moscow chronicler blames Martha and her entourage desire to "demolish the Greek Orthodox faith and draw Novgorod to Roman Catholicism" [21, p. 27]. Apostates from the true faith, "A Word from the holy scriptures Select & righteousness and humility", contrasted with Prince Ivan Vasilyevich - "the keeper, and strong advocate for Orthodoxy". The narrative is built on the antithesis of Ivan III, "head of the Russian lands", true holder of the earth, light Most Lucent piety, strong advocate of orthodoxy, noble. Novgorod men disobeyed "his sovereign", "craftiness of the pride thought". They forgot the great old days when their ancestors never retreat "from their master's names and the great rulers princes kept for you honestly and menacing". But their main fault is that they intended to "retreat of the Latin Kings", "dashing around Orthodoxy". Ivan III, according to the Chronicle, shows gentle patience, but all his attempts to reason Novgorod failed. Then the Grand Duke moved his troops to Novgorod and the Dvina. Consequently, the document was edited in order to justify a military campaign prince in 1471, is aware that the civil war did not honor its proponents and those tough measures that followed it.

To understand what the accused Moscow prince of Novgorod, we should remember that in 1456 his father Ivan, Dark Basil II, Grand Prince of Moscow and Vladimir, and the Government of Republic of Novgorod was signed Yazhelbitsky peace treaty ("dokonchanie"). This agreement marked the beginning of the accession of Novgorod to Moscow. Survived two copies of the contract, one signed by Moscow, the other - Novgorod, the treaty text on these copies are not identical. However, it is obvious that the independence of Novgorod was seriously undermined (not accidentally Ivan refers to Novgorod: "My paternal"; 1456 agreement concluded on behalf of Basil II and his son Ivan III, who was then a youth of sixteen), the republic was greatly curtailed the rights (for example, printing Novgorod, reassuring documents have been replaced by Moscow). Moscow, in the turn, promised to make some territorial concessions, but do not hurry with the commitments. Both sides are constantly violated terms of the contract and therefore the reason for the outbreak of armed conflict was easy to find. Needed was just an excuse. And found a reason.

In November 1470, died in Novgorod Archbishop Jonah, peacemaker. He held long Novgorod to "Westernism". But as soon as Saint Jona stepped into another world, in Novgorod "on the table", as requested by the king Casimir Novgorod, came the new prince, Michael Olelkovich. And as the prince arrived in Novgorod "Queen of hands", it gave rise to accuse Moscow Novgorod in the propensity to "Latins". Michael Olelkovich, unlike his great-uncle, King Casimir was not a Catholic, and Orthodox Christian, but the fact that Michael came from Uniate Kyiv. After the conclusion of the Union of Florence in 1439, recognizes the primacy of Rome in the union of the Christian churches, the Russian Orthodox Church split: Kiev union acknowledged Moscow. Moscow Metropolitans held land from Russian relations with the Uniates. The church authorities echoed the Grand Duke Ivan looking for faith in the writings of Novgorod Bishop Jonah. Jonah was completely in the agreement with this, but he died, and two weeks later the election of a new archbishop led to another conflict between supporters and opponents of Moscow. In the elections for the post of lord defeated Archdeacon Theophilus, a strong opponent of the union, who wanted to get ordained by the Metropolitan of Moscow. But the "fair game" Theophilus had no power in Novgorod, and lost the election Pimen supported local "oligarchs", headed by Martha Boretskaya, supporters of the rapprochement with Lithuania. Their "politically incorrect" behavior and led to another Moscow-Novgorod conflict.

Probably not without the machinations of the "party" Martha in March 1471, Michael Olelkovich left Novgorod (he was a strong opponent of the Uniates) and went to his native Kiev. Prince of Novgorod content with his entourage "was strongly: food... and great gifts" it distressed citizens. Not coincidentally, about Michael remained unflattering memory: "the prince of the

Queen hands "That is not the prince - the dirt! The prince of the Queen hands". In fairness it should be noted that Michael Olelkovich become a victim of the struggle for the "purity of Orthodoxy": conspiracy charges in favor of Moscow and for attempting to overthrow the Casimir, it will be executed in 1481 or 1482 and in 1471 his departure from Novgorod will give rise to new moment of the Moscow policy Grand Duke and the Metropolitan again addressed the Novgorod through its ambassador Ivan Tovarkovo-Pushkin, a descendant of the hero of the Battle of the Neva and the ancestor of the great poet. Prince Ivan Novgorod admonished: "My paternal natural ... "The flames were fanned Church affairs: in 1471 the Patriarch Dionysius I recognize Gregory Metropolitan Lithuanian and All Russia and sends to Moscow and Novgorod its ambassador demanding to take legal Gregory as Metropolitan. This game took the "Western orientation", in particular Boretskaya. "Gentlemen," this time was determined to be guided by Casimir.

In the "words of the elect" reported that I.V. Zamyatnya brought Ivan III treaty ratification of Novgorod and the Lithuanian prince Kazimierz, found Dmitry Boretskiy. Copy of the agreement with Casimir stored in the Public Library in St. Peteburge. Under a contract role of Novgorod prince "was selected" from the Grand Duke of Moscow and transferred to the Grand Duke of Lithuania. When this condition is stipulated to Novgorod "old and duties" was not disrupted, and most importantly - contained demands "the Greek Orthodox faith does not take away" and "Roman churches ... do not build". Kazimir pledged in case of any military threat to Novgorod "sit on a horse for Veliky Novgorod with all its". Also, do not rule mediation Lithuanian prince reconciliation Novgorod and Moscow [26, p. 165]. The treaty was concluded with the ambassadors of the King "by Theophilus betrothed dominion, and power from the mayor Vasili Maksimovic, and with all men Novagoroda Great Wave". All Novgorod "old" and duties, for centuries served as the basis of the contracts with the Grand Prince of All Russia, all of it is now redirected to a "fair king" and the Grand Duke of Lithuania. Consequently, Novgorod secedes from Russia and became enemies of Moscow. Historian G. Alekseev says: "The position of the Novgorod boyars, his break with the political system of the Russian land could play the role of torch thrown into a barrel of gunpowder. By the time the Union Novgorod Casimir and Casimir Achmat could become a reality" [1]. Authoritative opinion is worth to trust the scientist, this alternative development of Russian North-Western lands would be quite possible.

If trust to Moscow chronicles, in 1471 it was Martha Boretskaya sons made in the Chamber against the subordination of Novgorod Ivan III: "Toyu desperate thought all the people began prelschati Orthodoxy, Veliky Novgorod". "Party" Boretsky overpowered adherents Grand Duke of

Moscow Ambassadors Novgorod boyars went with gifts to Lithuanian (Polish) king. Learning of this, Ivan III June 20, 1471 was made with an army of Moscow [27, p. 54-55].

Chronicle describes how before going Grand Duke prays and is not just a prayer, its contents - a clear situation, underlining the importance of the historical moment, Thus, the Grand Duke is the sole custodian of the true Christian faith, and that the accusations Novgorod preferred to Latins and in collusion with the Lithuanian principality had to justify the actions of Grand Prince of Moscow, who spoke against Novgorod, "like apostate and Orthodoxy".

The campaign began. According to the chronicler, "crafty" Novgorod hoped its impassable swamps, but "their perdition" from May to September is not a drop of rain fell land, swamp of solar heat preskhosha". In the summer of 1471 Novgorod Shelon lined up on "the thirty thousand". As a result of the Battle of Novgorod did not survive the collision [15, p. 331-336].

Undoubtedly, the author of Chronicles purposely exaggerating, but really at the 14 July 1471 at the Battle of the River Shelon Novgorod militia headed by the son of Martha Dmitry Isakovich Boretskaya was broken Moscow army under the command of Prince D. Holmskogo Boyar and F.D. lame. Rebellious Novgorod was captured. Ivan III did not spare the prisoners Novgorod. Chronicler says: "mayor commanded to execute them" [20, p. 116].

More detailed account of the trial of the prisoners is contained in the second Sofia Chronicle (set in 1518 reflects the Metropolitan Moscow chronicles the first quarter of the XVI century)". [20, p. 116].

In the same year was awarded a contract Korostynsky: Novgorod Grand Prince of Moscow recognized his master and himself his paternal and pledged to break with Lithuania. The contract contained a very important point: selected at the Chamber lord "except Moscow Metropolitan nowhere to put". Intensified as the judiciary Grand Duke of Novgorod. With the "good people of Novgorod" was taken mercy, and "small people" Prince of Moscow ordered "otpuschati to Novgorod". For "pacifying" the Grand Duke posadnik new Thomas A. brought him 1000 silver rubles [27, p. 55]. Seemingly ordinary for the Russian Middle Ages "dokonchavni", but the main expert in this era Yuri Alexeev insists that "Unlike Korostynskoe dokonchanie Yazhelbitsky neither peace nor on the other, earlier prince of Novgorod and treaties. At this time, gentlemen not escaped any slight shock or severe (16 000, twice as much as in Yazhelbitsy) indemnities. First the traditional, from century to century Novgorod invaded new motive, subjugates the whole melody. Korostynsky agreement stressed not only the total elimination of the foreign independence boyar republic. He stressed foriegn administrative subordination of Veliky Novgorod authority's tsar of all Russia" [1].

After the signing of the peace treaty restored the Bishop Theophilus traditional procedure for the approval of Novgorod Archbishop of Moscow, "Metropolitan of all Russia". Orientation of the opposition of the clergy Novgorod to Kiev and Lithuania became impossible. In Moscow, at a ceremony attended by the ordination of Archbishop of Rostov Theophilus, Bishop of Suzdal, Kolomna, Ramsar, Perm, Ryazan, Archimandrite and abbots of the largest monasteries, the entire "Holy Synod of the glorious city of Moscow". On the occasion of such a solemn act of recovery Novgorod Russian state comprising the newly-born Archbishop of Novgorod, Grand Duke begged for amnesty for the prisoners countrymen. Prince Ivan took petition and "let go of all those with honor". "Those all" had 30 people. Begged the Archbishop of bondage, they went with him to Novgorod. It would seem that the incident was closed.

But after a few years of the independence supporters Novgorod from Moscow again became the most powerful force on the banks of the Volkhov. Resumed its activities and "party" Martha. In 1475 her youngest son Theodore Isakovitch Boretskii nicknamed Fool with power Posadnik Ananyin Basil, Ivan Loshinskim, Bogdan Esipov, Gregory Tuchin, Matvey and Yakov Seleznev Telyatevym Andrew, Luke and Semyon Afansevymi and others involved in the collision, robbery and burglary yards on his opponents and Slavkovye Mikitin streets on the Marketplace side [26, p. 166]. Probably to about the same time and the events described in one of the sources of hagiographic genre - "The Life of Barlaam Vaga". Most often, this piece sounds "muffled" editors "Life" reported that Basil lord, known in the North as ascetic Vazhsky land Balaam was forced to flee with his family from Novgorod to his estate on Vahe escape the intrigues of Martha [7].

Information about Basil Svoezemtsev was collected in the middle of the XIX century, native Shenkursk, hagiographic literature M. Zarinsk, who for many years worked in Vazhskoe region. Since 1845 Zarinsky - editor of "Arkhangelsk Provincial Gazette", where he publishes articles about life Svoezemtsevyh. In his description of the fate of Barlaam Vazheskogo appears, Reverend "was a contemporary Posadnitsa Boretskaya Martha, owner of large estates along the Dvina, which withdrew from the intrigues with the family from Novgorod to his estate, fearing that may not fall under the same fate, which succumbed to his friend or Miroslovsky Miloslavskii, completely missing then, but later turned out that she kept him in an underground prison" [9, p. 4]. As you can see, these data confirm the "violent" nature of Martha indicated in Moscow chronicles characters rather than the actual material. In November 1475, Ivan III came to court in Novgorod. November 26 the trial, which claims to Boretskaya were substantiated. Perpetrators were sentenced to the various punishments. Fedor Boretskii by order of Moscow Prince Ivan III in chains was exiled in Moore, where he was tonsured monks, and on May 9 the next (1476), he died [3, p. 223; 14, p. 55].

Great-reinforced Moscow and spiritual power: in 1476 in Moscow Church Council decided not to take on the Moscow metropolitan officials sent from Constantinople and Rome. This and other manifestations of dictatorship of Moscow led to a new surge of discontent in the former "free city" and in 1477 took a new campaign against Novgorod prince's troops. In 1478 Novgorod was "forever Zamir" and finally lost its former rights and privileges. In the Moscow chronicles written conditions of Ivan III: "Our state is as follows: the assembly bell in Novgorod not be; posadnik not be, and the state all to keep; parishes, villages we possess, as in Nizovoy own land, so it was on what we have in our paternal, and that our land for you, and you give them to us; No fear, the knights do not enter, and the court will be in the old days, as in the land court costs" [20, p. 116]. Nevertheless, the "conclusion" (in the Stalin era, it was called deportation) still held and knights moved to the Moscow authorities.

Not still elective and ecclesiastical authority of Novgorod. In 1480, Bishop Theophilus caught in relations with King Casimir, who was captured and imprisoned in Miracles Monastery. This gave rise to the right to cancel the citizens to choose their own rulers, and all subsequent Archbishop of Novgorod supplied Moscow metropolitans.

As for the "conclusions", "rebel Martha" lost their possessions and were repressed one of the first. No doubt, Boretskaya Martha was one of the most influential women of Nowogrod. N.L. Pushkarev thought that it is "because of the enormous wealth of Martha Boretskaya, who gained considerable political weight. Martha largest ownership was by the end of the XV century. Novgorod was third after the lord and monasteries"[27, p. 53]. According to estimates of G. Alekseev, "about 1,200 farms owned by Martha Boretskaya" [1]. It is true that she once gave the land o the Solovki to the monks settled there? To answer this question it is necessary to trace the steps of owning this land for the centuries. To answer this question it is necessary to trace the steps of owning this land for centuries.

Before the beginning of the XV century, the ground was the subsequently territory of the Karelian coast of Pomerania (and vicinity to the island), belonged Karelian nobility of the five generation of "Karelian children". In the first half of the XV century, the part of the land transferred to the Novgorod boyars. So, Novgorod mayor Dmitry Vasilyevich Gluhov were obtained by deed from literacy representative of one of the five generation of "Karelian children" (in this case Kurolchi) Howrah Toyvutovoy vast possessions (250 km from the East to the West, 150 km from the North to the South by the modern standards ). It should be noted that the purchase cost is very inexpensive, "the fourth - floor of the ruble", that is, for three rubles and a half [23, p. 24], suggesting that non-voluntary transaction. Dmitry Gluhov received "paternal Dedina and the sea on Vyg and

Shuya river and Kilboostrove and along the seashore, and Pongami river, on both sides, and her paternal leshim lake and Lesha Lopi portion there of, and Kutoozere her paternal and Kem river on horseback, where will be her father Vasily Kokui, and Solovki islands in the sea of her paternal and into the body in the islands" [18, p. 291]. Bill of Sale dated 1447-1458 [17, p. 2]

No documentary records of the transition land Boyar Glukhova Boretskaya to Martha, her husband and children did not survive. Perhaps this is due to the fact that after the submission of Novgorod Moscow boyars many archives have been destroyed, but vroyatnee all, and Martha was not the owner of these lands. Assembly records of the period show that the land zavolochskih graveyards in the XV century, Belonged to different owners and sites are often passed on bill of sale, mortgage and bondage from one person to another [9, p.3].

Chronologically, the first legal instrument to justify the right of the Solovetsky Monastery on any land became abbot mention Jonah from Novgorod mayor on which Solovetsky Archipelago fully assigned to the monks. Mention is given in the book "The geographical, historical and statistical description of the first-class stavropigialny Solovetsky Monastery" compiled Dosifey abbot in 1836. According to the document, only the monks had exclusive ownership "Solovki Anzer Island and island and Muksalma Zayatsky Island and small islands". Diploma dated no later than 1470.

It should be noted that the mechanism of transfer of the land was carried out is quite simple, if the land were "inside" of the Novgorod community. It was an ordinary transaction in the modern terms. But everything is much more complicated if the earth as a result of the transaction out of the jurisdiction of Novgorod. And here is the case: the monasteries possessed certain sovereignty that is not subordinate to the archbishops, and directly superior spiritual authorities. According to the then existing legal norms in Novgorod land transfer act in such a case must sign lord, sedate burgomaster, tysyatsky and "golden belt". That is the letter Zosima and received, the process described in his Life.

In solovetskikh patericon historians find and many other details about the events of those years. "Life of St. Zosima Savvatii and Herman, Solovetsky monastery the begginers" tells the story of a trip to Novgorod abbot Zosima, request the transfer of the possession of the Solovetsky monastery Obonezhie islands. Naselnik Solovetsky complained further harassment "knights and Korelskaya: "In the source, contains the story of how Martha would not let an old man on your yard, but then, giving the explicit request of the lord and the boyars, consented to the transfer of the island monastery" [7, p.124-126]. In addition, Martha allegedly gave the monastery land on the river Sume and even invited to the feast Solovetsky abbot where Zosima had a vision. Elder imagined that fellow diners Martha deprived goals and Zosima predicted them terrible demise.

Indeed, the boyars of Novgorod sympathetic Boretskaya were repressed Prince Ivan Vasilyevich during internecine struggle.

Legend of Zosima trip to Novgorod "hit"of hagiographic literature in the regional studies. For example, "Geographical, historical and statistical description of the Solovetsky Monastery" was written by Archimandrit Dosifey Solovki in the early XIX century. Based on the hagiographical sources, which were kept in the monastery library. Probably the same place, in the vault of the Solovetsky Monastery, and were removable letters - another kind of the historical sources (assembly material). This removable letters to the Solovetsky monastery, they are well studied and described by the experts [9, p. 4; 32].

We are primarily interested in, removable letters monastery data "personally Mar FOY Boretskaya". Two of them, donative first mention on which the monastery allegedly transmits a fishing hauls on Varzuga dated 1469-1470. It giver named "Martha Isakovskogo Veliky Novgorod Governor's Wife" [21]. Naming Martha Posadnitsa in this supplementary literacy led some writers suggest, as if Martha Boretskaya was even elected to the dignity of the Novgorod Veche Posadnitsa. However, since it could be called because she had in her possession posad his patrimony or boyarschinu. Besides Martha were the wife and then widow of Boretskiy Isak, Novgorod mayor and therefore could have only magnified Posadnitsa. Renowned historian V. L. Yanin considers that this this Martha Boretskaya Solovetsky monastery diploma is not genuine, the contents of which "there are a number of the elements pointing to its forgery" [35, p. 357-358]. The investigator V.A. Burov also cites a number of the arguments to prove that it is a fake between 1575 and 1633 years [5, p.193-196].

Another letter, according to the text, can be dated to between 1471 (it tells Martha remember Dmitry Isakovich, and his execution took place in 1471) and 1475 (as Fedor Isakovitch). In hagiography receive certificates associated with this second visit to the house of Martha Zosima. This time it cost him more than favorably - invited at the dinner table and gave the monastery charter to land on the river Sume. "Behold lang Martha A. Isaka wife and my son, Fedor Isakov, esm gave the house of St. Saviour and His Mother Fairest and St. Nicholas Solovki abbot Jonah and the elders of the sea; Sume in the river at the chapel two bows land where Parfianok yes Pershits live, and on the village land and reap and forest poleshey and torso water lake and goblins; tyi two bows in the house of the Saviour and His Mother Fairest and St. Nicholas on Current literacy this my rule over the abbot and the elders ever: and they pominati my husband Isaac , and my parents, and my children , and they staviti lunch Dmitriev day" [29, p . 12]. Two onion ground ( small vil-

lage) for Solovki economy at that time were not so large an addition, but the name Martha still remained in the memory of the local residents and inhabitants of the Solovetsky monastery.

Obviously, the role of Martha in Boretskaya ustroitelstve and development of the Solovetsky Monastery is exaggerated in hagiographic and regional literature. But as a person and politician, who performed besides various gender roles (daughter, wife, widow, mother, head of the party, the ruler of the estates, philanthropist) and breaks the stereotypes of the behavior medieval Russians, it is worthy of the study.

Concerning the death of the legendary Martha there are two versions. According to the first version, by order of Ivan III Martha Boretskaya together with his young grandson vasily was arrested in February 1479 sent to Moscow, then in Nizhny Novgorod. There she was tonsured under the name Mary Conception Convent, where, probably, soon died [4, p. 397]. By the second, Ivan III in February 1488 ordered to grab Martha with her grandson vasily, send them to prison and "tacos course tame Veliky Novgorod". Boretskaya vast possessions were unsubscribed Ivan III. Martha was executed before reaching Moscow, in the Tver principality Mleve village [27, p. 55]. This opinion is also based on the found in the village Mleve Vyshnevolotsk County Tver province near the Church of Our Saviour tombstone stone slab with the inscription: "In the year 3... put the servant of God presented on Martha pas..."

[24, p.36-40; 19, p.446-451; 14, p.57].

Remains debatable question: what could be an alternative to the development of the northern territories in case of victory "Western Party" Martha Boretskaya? Critical reevaluation of historical myths and legends, historical documentary sources would help to "read" the events five hundred years ago, based on the relevance of sociocultural factors in our century. For "problem field" in Russian society at the beginning of the XXI century remain the same: it questions the relation of totalitarianism and civil society, the role of the "oligarchs" and "people" in the country and the choice of the historical path of the nation, the relationship between church and state, "center" and the periphery. Probably should refer to the experience of the past, especially the "lifechanging" its marginal moments and periods, as was, for example, the age of Martha Boretskaya.

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### ТРАНСФОРМАЦИЯ ВНЕШНЕПОЛИТИЧЕСКОЙ СТРАТЕГИИ НОРВЕГИИ В УСЛОВИЯХ ФОРМИРОВАНИЯ БИПОЛЯРНОЙ СИСТЕМЫ МИРА (В ПЕРВЫЕ ПОСЛЕВОЕННЫЕ ГОДЫ)<sup>1</sup>

#### THE TRANSFORMATION OF THE NORWEGIAN FOREIGN POLICY STRATEGY IN THE FORMATION OF THE BIPOLAR WORLD (AFTER THE WAR)



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го курса Норвегии после Второй мировой войны были продиктованы комплексом про-1940-х гг. Формирование биполярной системы мира заставляет норвежское правительство по-другому взглянуть на свою внешнеполитическую стратегию.

Ключевые слова: история внешней политики, скандинавские страны, Арктика, международные конфликты, нейтралитет

Аннотация. Изменения внешнеполитическо- Abstract. After the Second World War changes in the foreign policy of Norway became a consequence of the problems that the country блем, с которыми страна сталкивается в faced in 1940. The growing confrontation between the East and the West led to the formation of the bipolar world and made the Norwegian government change the foreign policy

> Keywords: history of the foreign policy, Scandinavian countries, the Arctic, international conflicts neutrality

In the terms of the increasing confrontation between the East and West, the evolution of the role and place in the system of the Arctic geopolitical interests and the foreign policy of the USSR and the USA, Norway faces the need to change the course of its foreign policy in the first years after World War II. Norwegian Foreign Minister Trygve Lie, in his address to the Storting (the Norwegian Parliament) June 19, 1945 stated that the policy of the neutrality can not longer be

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safe for the country for the various reasons. First, is the experience of the World War II proved that Norway needed to strengthen the defense in the air and at sea (as it was with the air and sea, it was conquered by Nazi troops), but their efforts to create a new defense system of the country can not be [13, 24-27]. Second, an important strategic position in Norway has led to its vulnerability, so its neutrality would not be considered the warring powers in the new possible military conflict. As for cooperation with the Scandinavian countries, it is possible in the social, cultural and economic spheres, but not security. Continued speech of T. Lee received in the inaugural government statement of Einar Gerhardsen (where T. Lee was appointed Minister of Foreign Affairs) to the Storting on June 28, 1945. It said that the purpose of the Norwegian foreign policy is active participation in the UN and in continuing cooperation with allies and the northern neighbors [13, p. 37].

Due to the fact that in the early postwar years, the economic recovery has become the most urgent problem for Norway, she resumes the socio-economic cooperation with its Nordic neighbors. Such cooperation was initiated in May 1945, when the leaders of the Social -Democratic movement in Norway, Sweden and Denmark met in Stockholm and decided to recommend to their parties and trade unions to resume cooperation in the economic, cultural and social spheres, and to consider the possibility of the creating a customs union [4]. But the inability to stay away from the safety review leads to the fact that for 13 and 14 July 1945 at a meeting of the Committee for Cooperation of the labor movement in Stockholm began discussing foreign policy strategy of the Scandinavian countries. The Swedish delegation pointed out that the northern countries can not and do not want to adhere to the policy of isolation and should join the universal, global international organizations (UN), but with certain reservations. Under the latter implying that northern countries will not provide troops to any military action outside its region [5]. They also proposed that within an international organization may be based, and regional - Northern League defensive. But at that time the Norwegian government was of the view that the Nordic countries should build friendly relations with the western and eastern states and be a sort of "bridge" between the East and West in order to maintain harmony in the international arena and to prevent the World War II [5]. On May 2, 1945 at the plenary session of the VIII Conference of the United Nations, T. Lee said: "... the approaching victory was possible only thanks to the sincere cooperation and understanding of the great powers, and ... necessary to the future peace and future security rested on the same foundation" [1, p. 259-261].

Officially, "the policy of building bridges" was proclaimed the Norwegian Minister of Foreign Affairs, T. Lee November 6, 1945. It was the fact that Norway will not join any military and

political blocs will not act before the great powers proposed to create international organizations and participation in the UN in solving the problems of the collective security. The most concise characterization of the Norwegian policy of "building bridges" was of the U.S. ambassador to Norway Wayne Cole: "1. Pro-British, American. 2. Pro-Soviet, how it is possible. 3. Prounited nations how it should" [6, p. 121]. The main content of the Norwegian policy of the "building bridges" in the early postwar years was that as little as possible to declare their position on matters of the serious disputes between the Soviet Union and the Western great powers. The policy of "building bridges" in the early postwar years was that as little as possible to declare their position on matters of the serious disputes between the Soviet Union and the Western great powers. It is also clear that foreign policy was designed to meet a wide variety of the foreign Inters community groups - supporters of the pro-Western supporters of the cooperation with the USSR apologists "Scandinavian integration" and neutralists. Despite the presence of the positive principles in the grounds of the policy, its practical implementation "bridging" was largely passive course.

Thus, in the early postwar years, Norway tried in its foreign policy is not to be adjacent to any of the parties to adhere to non provocative behavior, first of all, the Soviet Union. "Bridges" were built [3, p. 193]. This was due to the fact that the Soviet Union and the Western great powers regarded as Norway's pro-Western country and understand that in the event of armed conflict it, anyway, will join the Anglo-American group. It was only a matter of time before Norway clearly show its instance and refuse to "sit on two chairs" [1, p. 259-261].

In the first public political statement of Halvard Lange made in February 1946 after his appointment as Minister of Foreign Affairs, Norway clearly emphasized the elected position non-alignment: "As a loyal member of the United Nations, we must do everything in our power to strengthen mutual trust between the countries on which the activities of the organization, and hence - to cooperate with all, without participating in the creation of any units " [1, p. 260]. But in this case, because of the increasing deterioration of the relations between the East and the West Norway risked be in the "sitting on two chairs", as both Moscow and the West have been looking forward to, and when it determines its position.

Explicit notes irritation broke from the British Ambassador, Sir Lawrence Collier (generally configured pronorvegian), celebrated in April 1947, and that the Norwegian government, and all the people "increasingly tends to bury his head in the snow in hopes of avoiding involvement in the struggle between great powers" [1, p.261]. This tactic was first balancing has been challenged on the strength in June 1947, when U.S. Secretary of State George C. Marshall announced his plan to help the U.S. in the economic revival of the war-ravaged Europe.

Norwegian historian, Professor M. Skodvin dates first manifestations of the change in Norwegian policy of neutrality October 1947 [12, p.62], since it is the time of H. Lange responded positively to it Ernest Bevin (British Foreign Minister), who recommended to the Government to support and coordinate the establishment of the defense system in Norway, Sweden and Denmark. It is obvious that such an initiative carried out with the intention that Scandinavia will join in the future to the military alliance of the Western Europe.

Scandinavian historians such as B. Gaskell, G. Lundestad, Riste W., H. Andren [1, 2, 8, 11], the performance of the British Foreign Secretary Ernest Bevin in the House of Representatives January 22, 1948 is starting point to find ways of the new foreign policy. In it, he advocates the creation of the union in the Western Europe against the «Soviet threat». Nothing specific about the role of the Nordic countries in his speech does not say, but, according to G. Lundestad, "it was obvious that the Nordic countries are included in the speech of the Western Europe" [11, p. 46].

Norwegian Minister H. Lange in his address to the Storting on 12 February 1948 stressed that Norway will likely be required to reconsider the direction of its foreign policy [14, p. 43], that it, had every reason to believe that if the external political situation change for the worse, the Kingdom would revise the "working hypothesis", which was based on the policy of "building bridges" [10, p. 55].

The main problems at the moment is the need for an effective defense system, the stability of the international arena and, as John Kirby, an unwillingness to be involved in the Western military alliance, which began to form as early in 1947 [9, p. 373]. Agreeing with this view, we emphasize also that this reluctance was due not sympathetic to the Soviet Union, but rather, fear him which is formed at the end of the Norwegian World War II. One causes of fear, was the proximity of the USSR borders and Norway. For example, according to B. Haskell, "a common border ... Norwegian territories proximity to Murmansk ... Norway makes for a special territory of the USSR".

Not only fears of powerful neighbor - USSR - Norwegian authorities were forced to reconsider the principles of its foreign policy, U.S. foreign policy in the history of the twentieth century called expansionism. American interests as well as the impact on the affairs of other countries to expand. In the last years of the World War II Norway enters the field of view of the United States. Former United States President, Harry Truman wrote in his book "Years of the solutions": "Norway refers to the original objectives of the Allies ..." [15, p. 112].

So, caught between two rival systems, the Norwegian authorities were faced with the need to find new lines of the foreign policy. The last war obviously gave them to understand all

their military vulnerability and showed the illusory idea that the Northern Region would remain for the foreseeable future in the historical conflict between the super powers. Note also that in the last years of the Second World War, these illusions were widespread enough; the Scandinavians have not yet tried to think and act as if serious political and military confrontation in their region can be avoided by strict neutrality. At the end of the war, even an idea of revival of neutrality in the form of the refusal to accept the position of any of the countries that could potentially start to quarrel in the Northern Europe and the Arctic. But the postwar political events unfolded so rapidly that within a few years led Norway to abandon neutrality [7, p. 60].

Of all the Scandinavian countries, Sweden most persevered adheres traditional stance of neutrality, "personal" experience of the World War II urged the country made the right choice. This can be explained by the fact that Sweden is potentially less vulnerable than, Finland or Norway, and strategically less important to the U.S. than Denmark. Although the same Sweden could face increasing pressure from the Soviet Union in the Baltic, Finland or the Arctic. Still a priority for Sweden was the idea of the spread of "armed" neutrality for the whole Northern region through the creation of the North defensive alliance. This approach was not only in accordance with its traditional policy, but helped to avoid a conflict with the Soviet Union.

Norway, hoping to avoid the polarization of the forces in the region, in general, agrees with the Swedish arguments [7, p. 61]. But, unlike Sweden and Finland, needing a quick economic recovery took American aid for "Marshall Plan" and was a lot of related circumstance. As for geopolitical peculiarities of the northern Norway, they were as there is a common border with the USSR and the close location to the bases of the Soviet Northern Fleet. Therefore, Norway has a natural need to be combined with a sustainable policy of non provocative behavior. Her experience of the Second World War was to some extent similar to the Danish. This final general skepticism about the effectiveness of the neutrality. In addition, Norway has learned a lesson from the fact that its important strategic location was the cause of loss of the independence (in April-May 1940) due to the invaders that the country has managed only after the arrival of the external reinforcement. According to the American historian D. Fittsmariusa formed the Norwegian foreign policy stance since the spring of 1944 [7, p. 118].

Tracing changes in the foreign policy strategy of Norway after the war can be concluded that the policy of "building bridges" ended in failure, the cause of which was the growth of the contradictions between the great powers, the beginning of the bloc confrontation and the formation of the bipolar system. This served as constituents of the Soviet-Norwegian-American relations that affected the foreign policy of Norway. Soviet-Norwegian friendly cooperation trans-

formed into untrusted. Adoption of Norway "Marshall Plan" and "Plan Bevin" caused a change of the orientation of Norway's foreign policy and the transformation of its foreign policy.

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## ТАЙНА ПРОЛИВА НЕЙМАЙЕРА THE MYSTERY OF THE NEUMAYERS STRAIT



- © Зобнин Андрей Николаевич, историк-краевед. Область исследований: история Русского Севера, история освоения Арктики. Член Русского географического общества. E-mail: zobninandr@mail.ru
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имеющихся на сегодняшний день сведений о последних днях Г. Я. Седова, его кончины и захоронения. Указаны направления дальнейших поисков могилы начальника первой русской полюсной экспедиции

Ключевые слова: экспедиция, Седов, святой Фока, матросы, Линник, Пустошный, ЗФИ, Рудольфа, нарты, лед, арктический, Новая Земля, пролив, мыс, Аук, маршрут, путь, стоянка, остров, геология, гидрология

Аннотация. В статье сделан анализ всех Abstract. In the article made an analysis of all the currently available information about the last days of G. Y. Sedov, his death and burial. On the basis of these materials are given the direction of the further search for the tomb of the first initial Russian polar expedition.

> Keywords: The expedition, Sedov, Holy Fock, sailors, Linnik, Pustoshny, Franz Josef Land, Rudolph, sleds, ice, Arctic, A New Earth, Strait, Cape, Auk, route, path, one-Janka, island, geology, hydrology

Nearly a hundred years separate us from those tragic days, which hapenned in February 1914, when the ice of the northern islands of Franz Joseph melted and died the senior lieutenant of the Russian Imperial Navy- Georgy Sedov. Becoming a symbol of fortitude, dedication and at the same time an example of arrogance, G. Sedov will forever remain one of the central figures in the history of the Arctic exploration. Unparalleled pursuit of the goals, his tragic death raised to an unprecedented level of the interest in high latitudes, performing it is as the main purpose.





Many publications, especially recently, accusing Georgy Sedov in extremely poor organization of the expedition, inspired more time. We must not forget about the three expeditions, published in the Arctic summer of 1912 and from the expedition returned only G. Sedov. Rusanov - Accusing Chief of the pole expedition unprepared the project and went on the completely unnecessary risk, knowingly about the condemning people, who confided to him the trials and the tragic death of the whole expedition, whereas G. Sedov sacrificed their aspirations only themselves. As for the mechanics of the vessel Zander, who was crushed of the scurvy island of Hooker, the little expedition which avoided the deaths after two Arctic winters.

In 1915 L. Breytfus wrote: "... recognizing our brave researchers, rare fanatical energy, in spite of all obstacles, walked forward to the goal, we wish and hope that that the explosion of interest in the wide north circles of the society, which caused particularly Sedovs expedition, has not gone without a trace, and that in the future a broad and systematic study of the Arctic region was supported by public sympathy "[1].

Few of the pioneers won such fame and glory as G.Y. Sedov. And, apparently, the last 100 years, all that could be associated with the first Russian polar expedition. But the circumstances of

the death and burial of its chief still cause a lot of controversy, conjecture. Reason for this was long, but, unfortunately, unsuccessful search of the graves of Sedov.

In the summer of 1937 on the coastal slope near Cape Auk, winterers H. Libin were found items that, according to the testimony of the sailors Linnik and Barren, had to be in the grave: flag pole with copper sleeve, which remained about the engraved "Expedition of Sedov. 1912-1914". "Rusty hatchet, torn of the Russian national flag, fragments of fur garments, pieces of the rope and canvas fabrics. Sledges, remains under a stone on the embankment disappeared".

Starting with high-latitude of the expedition of O. Schmidt on the icebreaker "G. Sedov" in the summer of 1929 and to prospecting the crew of the yacht "Apostol Andrey", club "Adventure" in 2011, searching for the traces of the burial takes a lot of the generations of the explorers in the Arctic. The question posed in 1914 by the crew of "St. Phocas"- "Where is the grave of G. Sedov?" By 100 years remains unanswered.

The reasons for this are logically to note two: stone mound with the remains had been destroyed or it was never there. These were the main conclusion and direction of the present investigation, the purpose of which is not to make a final decision, but on the basis of the facts and documents to consider all possible versions, which could be as close to understanding what really happened on the ice Neumayer Strait in February 1914.

The first step is to trace the path of the expedition on. Jackson and before the approach of the sailors to the Frozen Cape, because these days it is necessary to consider the whole tragic finale pole expedition. Information diaries of Sedov, Linnik and Pustoshny allow making the parallel way on a modern map and the map of G. Sedov. Such a comparison will provide an opportunity to see the features of the route of the expedition, which were poorly represented in previous studies.

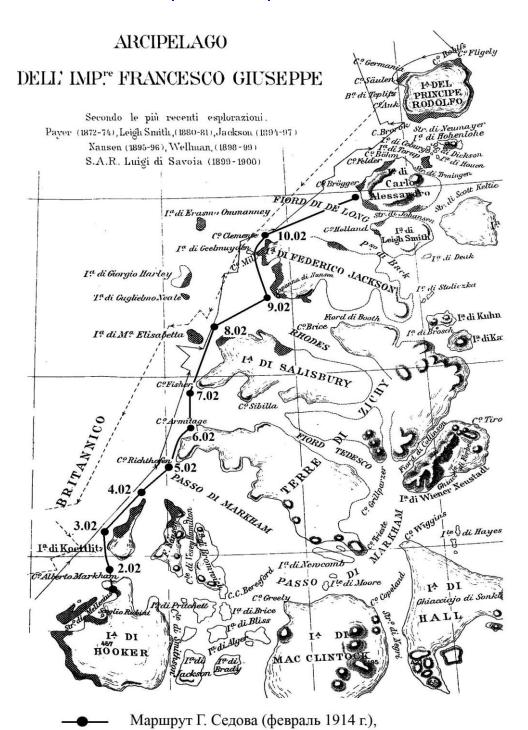
Small problem here was to find a card that could be at G. Sedov during the polar expedition. By reviewing several options, including drawings of Nansen, who helped to co-driver "St. Anna". V. Albanova reach the Cape Flora, it was natural to focus on a more complete ones - Expedition Map Duke of Abruzzi (Principe Luigi Amedeo di Savoia, Duca degli Abruzzi) [2] on the barge of "Stella Polare" (1899-1900) (Fig.1). At the first comparing it with diary notes of G. Sedov no longer any doubt that he enjoyed a similar card, only in English. Drafted materials of the expeditions of Payer (1872-1874), Lee Smith (1880-1881), Jackson (1994-1997), Nansen (1895-1896), in 1912 it was the most reliable map of PFI. As will be seen further guidance it exactly coincided with the specified route of the expedition.

On Monday, February 10, the pole of G. Sedovs expedition came to Cape Island Klimentsa Jackson. From this point begins the confusion straits and islands. Reading the existing map of Sedov no doubt that on the other side of the bay is visible DeLong Land Charles Alexander. In fact, it was the north-eastern part of the island Jackson (Figs. 1 and 2).

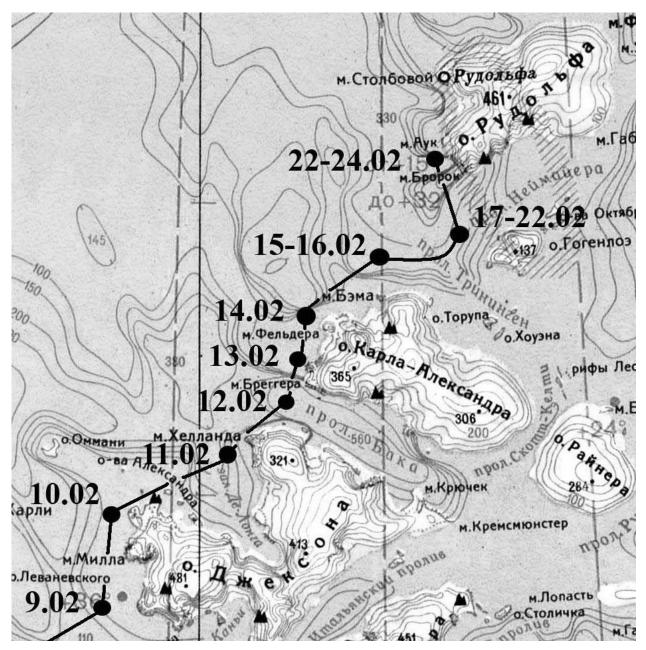
The next evening, taking in the Cape Helland Breggera, he wrote in his diary: "... In 4 hours stood for the night, going about 15 miles to the Earth Alexander. Today it seemed almost sun. Already seen Teplitz-bay. I feel better, because i warmly dressed and had sat quietly on the sled" [3]. In fact, he did not see the bay Teplitz of the Rudolf Island and the western shore of the island of Alexander, to shape the coastline really like Teplitz-bay.

The next day, 12 February, a group crossed the Strait of Baka and only now came to the island of Charles Alexander. The map of Sedov showed otherwise. "Gone ... about 15 miles - wrote George, - and stopped at 4 hours for the sleeping at the Earth Rudolf. Today was a minimum -42 °. Now blowing points on 4 Ost. Tent considerably ruffled, we're like gypsies, sit around a kerosene stove" [3].

February 13 at 9 am the expedition moved to the west coast of the island of Alexander and five miles came to a small island off Cape Breggera Islands (Pontremoli). In the belief that they are on the south-western coast of the island of Rudolph, "the whole day Pustoshny wrote and searched Teplitz-bay." Sedov was also at a loss: "... Wandered into some strait between the islands, but not in Teplitz-bye, though he already felt close. After 2 appeared the sun became a wonderful, warm day, but the road is heavy: the snow and ropac. In the ocean, you can see a lot of water, as seen with the black sky. In 5 hours stopped for the night, it seems the Earth Rudolf difficult to judge with confidence, as in this terrible place card is not valid. Let's see what will be tomorrow ..." [3].



Pic. 1. The map of the expedition of Duke A. Abruzkogo



Pic 2. The modern map of the Northern Islands of ZFI

February 14, at three in the afternoon, the expedition left to the north-western tip of the island of Alexander, to the islands of Cape Chichagov. Only here Georgy Yakovlevich realized where they are. "Snow, fog, - he wrote - nothing to see, dogs are not driven. Trudged about 3-4 miles and camped. A group of small islands between the Earth and Rudolf Alexander (most of S. N), to the W and N water, nothing can be seen" [3]. In this record, it is important to pay attention to the notes in the brackets, which could designate only "in the most northern cape" ("S." - it is nothing like the English "care" - cape). This is quite definitely confirms the group of Feb. 14 at the north-western tip of the Earth Alexander. This point is very important for understanding their future path.

The next morning Pustoshny climbed onto one of the islands and at the north-east saw the Earth. Without a doubt, it was Rudolf Island. Of the three diaries shows that to the north and west were open waters.

At 9 am, the group moved as Pustoshny wrote, "from the coast towards the ground where lay our way." That is, we must understand right in the Strait to the island Triningen Rudolph. It also confirms the entry of Sedov, "Saturday, February 15. At 10 is clear frost of 30 degrees. Went through the straits to the Earth Rudolf, which was clearly visible, going about 12 miles away, stumbled upon a continuous, thin (1 ver.) Etosha" [3]. About the distance covered in the diaries, there are significant differences that are difficult to explain a simple slip of the pen. Pustoshny noted "11/2 mile" while Linnik quite clearly indicated that "passed no more than one mile, seen from all sides ahead quite fresh ice". I guess it would be logical to trust the two, almost identical readings of Sedov and determine that on February 15, the camp was approximately in 7 miles to the north of Cape Bam (Fig. 3).

Sunday February 16 Mardi Gras. Pustoshny wrote in his diary: "Today, far from their homeland under 82° the north latitude on 4 inch saltmarsh we celebrated the Carnival and remembered each as walk our comrades, and we sit by the sea and wait for a good frost to brace saline to move us to the north" [4]. Sedov looked at the meal of the sailors, among other things, wrote: "... of course, would eat the egg, sour cream, fried chicken, even a cup of sauerkraut. But where was all this? ... "As a holiday gift the sun came out" We saw the mountains above the first sweet, dear sun - happy Georgy Yakovlevich. - Oh, how beautiful it was and well! At the sight of it, our world upsided down. Greetings to you, a wonderful miracle of nature! Shine of our loved ones at home, we stayed in a tent, as sick, dejected, at 82 ° north latitude" [3].

After a celebratory lunch of the sailors went to inspect the road. Coming to the east about seven miles away, they realized that "it was impossible to go straight, and you needed to go east, and then be forwarded to our land". Fear that the gale will break the thin ice on which stood the camp, it was decided to continue the path to the island Rudolph took to Ost.

February 17th, in the evening, the travelers were at the southern tip of the island, close to the shore fast ice. Strong storm for three days stoped the advance. State of health deteriorated rapidly the head of the expedition, and he could not write. The last lines in his diary: "Monday, February 17". Three days later, February 20, 1914, in 2 hours and 40 minutes of the day G. Y. Sedov died.

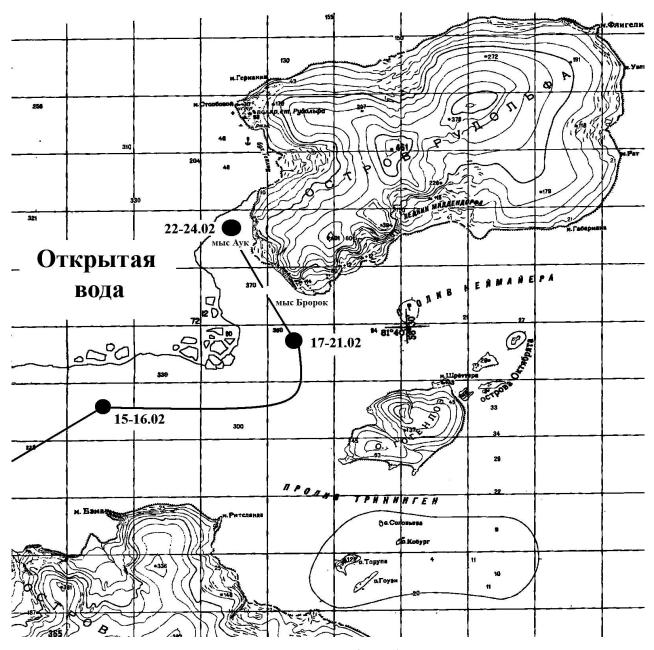
Guide further actions took the sailor G. Linnik. "In Teplitz Bae or elsewhere on the island - he wrote - leave half the cost, and if we do not find kerosene, we had to bury boss. Tomorrow I

think to go further. And if it would be wintering Abruzzi, it will be passable, and if not, the body will have to leave of the chief". Besides, there were the signs of scurvy barren. Here it should be noted that the confidence that they are on the island and the bay Rudolf Teplitz-bye very close, they were not enough. The recent confusion with the islands and straits significantly undermined their confidence in the map.

Two days after the death of the chief, February 22, the sailors headed along the west coast of the island. "At three o'clock in the afternoon - wrote Linnik - barely dragged themselves to the Ice Cape and 300 fathoms, or 400 from the shore camped since, firstly, old ice ends and begins a completely fresh saline, and secondly, dogs driven nothing" [5].

Only Cape on their way, which can be called the Ice, was without a doubt, the glacier front of Cape Auk (Fig. 3). For a more complete confirmation that the sailors went to Cape Auk is necessary to pay attention to all the details mentioned in the diaries, and consider some scenarios, from February 15. On this day Pustoshny first saw Rudolf Island (land to the north-east), it would be natural in this case to sail to the south-west, ie the Cape Felder. At this point nothing but Rudolf Island was not visible. And the next day already traverse Cape Bam take any other island, for example, Hohenlohe, for the island of Rudolph, especially for a whole, is quite impossible. Neumayer strait is clearly visible here. The likelihood of such errors could be, if you look at these islands from the south-eastern part of the Earth Alexander. But doubt that Sedov went around the island from the west, there is no information.

In addition, further their way precisely specified in the records of Linnik. February 17, among other things, he noted that "fortunately, the road is very good and we were moving forward rapidly. But before they reached the island a couple of miles of Crown Prince Rudolf, I like walking in front, began to roll with fresh ice on the old, heading to the island, and at the junction of fresh ice with the old ..." [5]. Here you can see what else February 17 expedition was three miles from the island at the junction of Rudolf fresh ice Strait Neumayer and fast ice island.



Pic. 3. The Island of Rudolf

In addition, further their way precisely specified in the records of Linnik. February 17, among other things, he noted that "fortunately, the road is very good and we were moving forward rapidly. But before they reached the island a couple of miles of Crown Prince Rudolf, I like walking straighr, began to roll with fresh ice on the old, heading to the island, and at the junction of fresh ice with the old ... " [5]. Here you can see what else on the February 17, the expedition was three miles from the island at the junction of Rudolf fresh ice Strait Neumayer and fast ice island. And if so, then a six-hour shift with the body of the head of the expedition on February 22 could be only along the west coast of the island of Rudolph, ie to Cape Auk (Fig. 3). Pustoshny accurately points out: "We moved slowly and walked 7 miles from the parking, we again pitched a tent on the old glacial ice of 300 yards from the high bank, which shows a lot of stones. When we

pitched a tent, then went further to the north, watch the road and place that cape, to which we were going and, in our opinion, and he also Teplitz-bay ".

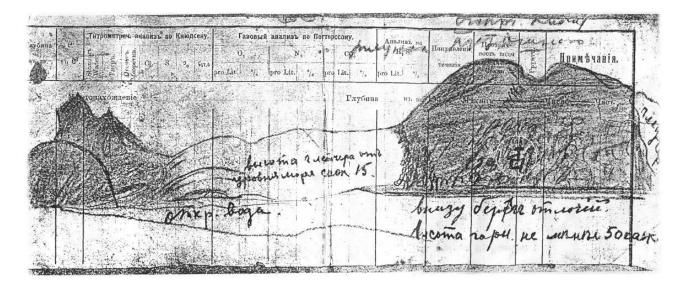


Pic. 4. The cape Auk

From Cape Brorok sailors could not see the bay of Teplitz. First it said HSU, Academician E. K. Fedorov. In his "Polar diaries" he recalled, "According to the description of the sailors, it was believed that the tomb is located at the foot of the Sedov Cape Brorok. I carefully examined every square meter of the shore, but the graves were not found. I did not know then that he was a few kilometers to the north - under a cliff Cape Auk. In the summer of 1937, the polar station on Rudolf Island found there a staff with a scrap of Russian flag and a few things, of course, owned by Georgy Sedov. Linnik and Pustoshnys little mistake in the description of the place. It was understandable. And I could understand that only from Cape Auk, but not from Broroka, overlooks the bay of Teplitz, only here Linnik and Pustoshny could not see the ice in the bay" [6].

In fact, the sailors were not wrong in their diaries rather accurately describe the path to the end point of the travel and, even more surprisingly, gave a detailed description of the place where he buried the head of the expedition. With their words expedition artist N. Pinegin made a drawing (Fig. 4).

In the summer of 2011 the crew of the yacht "Apostol Andrey" club "Adventure" with Captain N. Litau approached the west coast of the island of Rudolph to compare the figure with the real N. Pinegins overlooking of Cape Auk. "The boat moved to the edge of the rare ice - wrote in his diary, Captain - and from the point where you opened the whole coast from Cape Auk Stolbovoye, it became apparent how this picture looks like a picture archive. They certainly do not coincide completely. So, at Cape Auk was not so deep as in the picture, and Cape Stolbovoy had not two peaks, but flat and not pointed, as depicted by the artist. This was perhaps the main difference. Otherwise, everything was in place: Right - sheer cape Auk, left - headed Stolbovoy between them water" [7].



Pic. 5. The picture by N. Pinegin. Burial place of G.Sedov

Thus, it must be considered proven that the last parking spot and sailors Linnik was barren Cape Auk. On this basis, according to the sailors, it would be natural to assume that the tomb of G. Sedov is under a cliff this cape, "on the slope height up to six yards from the sea level", as shown in the figure of Pinegin. But it is not there, except for a few items, including a flag pole with brass sleeve, which remained engraved "Expedition leit. Sedov's 1912-1914". Its belonging no doubt.

\* \* \*

The most common assumption among historians about the causes of the disappearance of the glacier became the grave of Sedov, who could carry on the sea stone hill with his remains, leaving the surface of the items. This version is more likely could clarify the situation, if not objections of other specialists - glaciologists. Rudolf Island is 98% covered by a glacier. In the central part of the ice cap surface is relatively flat, but the periphery is becoming greater bias and goes into the origins of the valley glaciers that break off into the sea, forming icebergs. We are interested in the western part of Rudolph, according to the experts, have a more complicated dissected relief than the east, and are "elongated depression in the bedrock relief of the island, which in most cases are a continuation of bays". This is the so-called outlet glaciers, which account for a growing mass of ice is given in the sea. Outlet glaciers, located on the both sides of Cape Auk Rudolf Island, a short, but with a broad front in the output. Glaciologists say that the probability of slipping from the top of Glacier Point Auk is so small that it can hardly be considered necessary. This could only take place in case of the increase in the central part of the ice, and this is a global glaciation.

It should also be noted that avalanches than slipping glacier bring such devastation could not because of the small height of the cape. This is confirmed by the memorials established at different times on the Cape and Cape Brorok Auk. Signs stood there much longer alleged burial Sedov, but did not disappear without a trace. This refutes the argument over other versions of the natural causes of the destruction.

In addition, it was possible to draw attention to the possibility of destroying graves by the polar bear. There is ample evidence that these animals are easily moved a large stones. This version is simple and has the largest number of the vsupporters. One could take it as a basis and to put an end, if not for the circumstances that make the most cautious approach to the analysis of the materials of this complex.

\* \* \*

Immediately upon arrival, "St. Martyr. Foca" ("Michael Suvorina") in Arkhangelsk, the Committee Gear expedition to the North Pole and Russian polar research countries immediately filed a petition for an investigation of the causes of the death of Lieutenant G. Sedov" in order just to remove all responsibility and possible criticism.

Committee Secretary Captain of the2nd rank P. I. Belavenets in his testimony Petrograd Prosecutor on December 5, 1914 wrote: "I personally, as well as in other members of the Committee, after reading the first news about the death of Lieutenant George Sedov, had a natural suspicion of his death. Upon arrival in Petrograd Sedov expeditions members that suspicion is not dissipated, and after talking with arrived in Petrograd veterinarian Kushakova party the same expedition, this suspicion was reinforced. Kushakov being closest collaborator to Sedov and the only one in my opinion, "respectable man" of all who served on the ship, in a conversation with me, he told me a number of abnormal phenomena in the life of the ship's crew: especially noticed Kushakov the increased demands from the sailors and Linnik Pustoshny, who several times was satisfied with Sedov, apparently referring only to an urgent need for the participation of these sailors in the transitions to the North Pole. Reach the pole of Sedov was a dream, and he is in no matter what was decided to implement it, despite certainly set their painful condition before leaving. Knowing this "idéefixe"Sedov, sailors who were to accompany him to the pole, exploited Sedov, when he refused them meet their excessive demands, threatened him with "crack down" the road to the North Pole "[8].

Here P. Belavenets pointed out that the documents of the expedition, including diaries of Sedov, book orders and the logbook were with him, but evidence of the relationship to the head of the expedition sailors, that is orders of the punishment Linnik, were not detected. Last blog of

Sedov (February 1914) was sent to the prosecutor of Arkhangelsk Regional Court, and all other blogs transferred to the widow of Sedov - Vera Valerianovna, who lived at that time in Petrograd.

Thus, the Committee Gear expedition to the North Pole and Russian polar research countries, guided by the testimony of P. Kushakova and their own reasons, was inclined to believe that a crime might have occurred.

Of course, the natural suspicion of the death of Sedov emerged largely from the words of Kushakov, who has repeatedly expressed his displeasure with the behavior of the sailors.

Here is one of his reports filed chief of the expedition shortly before the release of the pole groups: "Hs number while on duty, I heard a loud noise and screaming into the dining room command. Coming to the last, I heard the voice of the sailor Linnik, swear oaths and obscenities, shouting: "I'm going to the North Pole, risking my life, but because I will not eat any rubbish". ... Despite the secondary ... commanded silence, sailor Linnik in the presence of the whole team, more and more, raising his voice began to put me insulting words, accusing that I am the evil of the expedition, not interfere in the business, all cheating, etc. Finding a real act ... sailor Linnik, as well as several other of his actions, with a tendency to disturb the whole team, constant censure and cussing at all persons in authority of the expedition, not excluding you, as well as a complete unwillingness to obey not only the basic requirements of the law, but also demands of your orders, — highly non-disciplinary, ruining business expedition associated with the dignity of the whole country, honor Russian name and Russian flag - I ask you about the tradition sailor Linnik court. Duty Officer of P. Kushakov".

\* \* \*

September 12, 1914 Assistant Prosecutor Arkhangelsk district court questioned Taratin sailors Linnik and barren. Their testimony differed little from the diary.

From the interview of Mr. Linnik, 26 years old, was from Poltava province, Orthodox educated "... On February 20, in the afternoon Sedov had asked and I cooked him broth, but Sedov had not eat it, as with Sedov had a fit - began to complain that the torn chest that he could not get warm, despite all the measures we are taking, lost consciousness, went out of his mouth foam. I'm beside him, supporting his head. Sedovs last words were: "My God, Linnik, supported". Sedov died and when 15 minutes later, holding his head, I looked him in the face, I found that Sedov dead. It was 2 hours and 40 minutes on February 20 this year. With great difficulty, we got to the land located near barren and buried Sedov, making a cross of two stashed skis. We could not dig a grave, and besieged the frozen corpse of the stones, putting on the right side of the corpse flag. Graves location on the southwestern side of the island 12 miles of Crown Prince Rudolf of the wintering

Duke of Abruzzi, in 5 fathoms of the sea level on the shore under a rock. Since we removed the corpse only pocket chronometer, all the same clothes he was wearing, not touched.

The indications of A. M. Pustoshnii, "23 years old, peasant of the village of the Arkhangelsk province" just not brought anything new. "We buried him on the southern tip of the island of Crown Prince Rudolf - he recalled the last day of Rudolf Island - 12-15 miles from wintering grounds on the banks of the Duke of Abruzzi on the slope in 20 fathoms of water and 5 yards from the sea level, and the grave put a flag on a pole with an inscription in English: "Sedov expedition, 1912" [9].

It is clear that in the absence of the evidence to the prosecutor of the Arkhangelsk Regional Court had no choice as to close the case for lack of the evidence. Nobody could not assume that ther was not the grave on the island Rudolph. This fact no doubt would be an important fact in the investigation of the causes of the death Sedov.

In the summer of 1929, the crew of the icebreaker "G. Sedov" tried in vain to look for the grave at Cape Brorok. But even then, no one had any doubt about the veracity of testimony and barren Linnik. All explained by the natural causes. "Ice streams rushing with glacier meltwater scouring boulders, causing a heap of sand and clay - wrote one of the participants - apparently not spared and the last resting of Georgy Sedov[10]. Participants, searches set up on a red board with the inscription in Russian and English languages "Soviet expedition of the icebreaker Sedov" in 1929.

The question arises, why in 1937, before the discovery of the items belonging to Sedov, was regarded as the burial place of the Cape Brorok? The answer to it could become protocols inquiry of B. Wiese. Back in March 1914 upon arrival at the ship sailors told everything that happened to them, and as the evidence submitted their diaries and diary of G. Sedov. Acting head of the expedition P. Kushakov instructed geographer B. Wiese carry out some kind inquiry. After some questioning and reading diaries from the governing of the expedition prevalent opinion that the tomb is located at Cape Brorok.

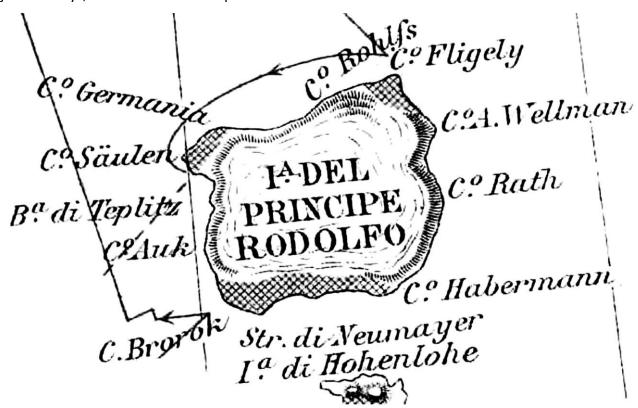
After the captain of the 2 rank- P. Belavenets Petrograd prosecutor wrote: "The Protocols of the survey are from Wiese, that does not deny himself, but my suggestion to transfer these readings Committee, said only" good, good ", but these documents were not passed" [8].

Even without this protocol is not difficult to understand that everything is based on oral testimony of the sailors, who pointed to the Cape Brorok. Later N. Pinegin wondering "Where was Sedov grave?" Wrote: "Linnik and Pustoshny not read the card with them incomprehensible English inscriptions. From the words of returnees can be assumed: at Cape Brorok Earth Rudolf, at the

foot of the steep bank, at the height of ten meters from the sea, in the place where it ends the eastern part of the glacier and starts the rocky shore" [11].

It traced the apparent discrepancies, which attributed to simple ignorance of the sailors. After all, no one even noticed how different information of the sailors diaries with their stories on arrival at the ship. The first thing that catches your eye - why sailors have focused precisely on Cape Brorok as the end point of its travel? Even with the known magnetic anomalies in the Strait of Neumayer, we must try hard not to recognize the extended south cape, just marked on the map (Fig. 5). Besides the sailors did not have to "read" the map as Pinegin believed, and still many researchers believe that they could simply collate seen with a card that would not be a big deal. Their diaries say enough for this education. Biggest mistake would be to explain everything to illiteracy sailors. In their diaries, they wrote and read the testimony, exactly as the inscription engraved on the flag pole, "Expedition of Sedov 1912-1914". And thus can not distinguish "Auk" on "Brorok", that at least surprising.

Little faith and that sailor Linnik could map their stops at the island with Rudolf and safely, just ten days, came back to the ship.



Pic. 6. The cape Brorok

She told Popov a chilling story, according to which the sailors Linnik and Pustoshny on arrival in Arkhangelsk confessed to his father that after the death of their chief, they dismembered his body and scattered around the island, thus the grave was destroyed by the polar bear. Xenia's fa-

ther, Peter Mineyko, at the time of the Arkhangelsk port engineer, was friendly with Sedov and took some part in the preparing for the expedition. Apparently, sailors knew and trusted engineer, otherwise this sensational information inevitably would fall into the investigation materials.

This development is more like a low-budget thriller script, could be considered even if this information came from people outsiders. In the same decency K. Popov is no doubt, therefore, making a difficult choice between being able to accept them as a fact witness, and the prosecution of their lies, preference is undoubtedly the first. On the surface, one might think that the motive for such an act can only be an attempt to cover up the crime, ie murder Sedov. But for some analysis you can find this and other explanation. The fact that the diaries of the sailors and their statements give a complete picture of the death of their leader, and with many details that it would be impossible to come up in the difficult conditions of the writing diaries. Anyway, no one line is not in doubt in naturally occurring. To commit such a crime and concealment of his skilful and daring needed extreme cynicism. Such traits could not be seen for two wintering, where each person is revealed according to their inclinations. Linnik, most doubtful their discontent action of officers, was generally characterized by the expedition of B. Wiese and N. Pinegin. Therefore, by exceeding the arguments for the absence, as a fact of the natural death of Sedov to prove the converse is quite impossible.

In this case, the main reason for the lack of the graves is likely to be found in the actions of the sailors after the death of Sedov. Initially, February 20, they are "mutually" decided to maintain the body to the vessel ". The body of his boss - wrote Linnik on February 21 - struggled trying to deliver the ship, as it was expensive to us all the same". But by the evening of the same day the solution to their changing: "... if we do not have kerosene, you have to bury boss". What has caused such a change?

Of course, one would assume that a day later, when gradually subsided experiences sailors have to soberly assess their situation and realized that the lack of fuel in the event of unforeseen circumstances on the way back to face death, and therefore decided to burial. But if the whole issue was a lack of kerosene, as explained sailors, why they did not even try to take him on the basis of the Abruzzi? After swim in one bay empty kayak would be a matter of a few hours. There is something to think about.

Interesting in this regard may be one episode that occurred at the station Rudolf Island. Known polar navigator B. Akkuratov recalled how in 1937-1938. Pilot I. Mazuruk after landing at the North Pole were left to drift insurance SP-1 and explored the ruins of the Italian and American expeditions Abruzzi and Fiala. "One day - remember Valentin - we got a strange and unexpected

find. Clearing the ice one of the rooms of a residential house of the American expedition, on the table beside the bunk we found ... ladies' shoes! Lacquered, small size, a little worn and perfectly preserved. On the inner side, on white kid lining stood golden stamp with the inscription: "Supplier of the Court of his Imperial Majesty. St. Petersburg". One thing was clear: in expedition of Sedov women did not participate. So, this shoe was a souvenir ... But whose? Apparently, Georgy Sedov, who married before the march to the famous ballerina May-Majewski. It's something he took the shoe, probably with them as a memory of his wife. Scrupulously as the most meticulous archaeologists and detectives, we continued the search. But, alas, no other findings are not followed ... "[12].

Given the fact that in Teplitz Bay until 1936 came only one Russian expedition on the icebreaker "Sedov" (1929) and spent the winter on the polar station of F. I. Balabina (1932-1933). We would assume that the shoe bought in Arkhangelsk and brought here by one of the Italian or American expeditions 1899-1905. But, according to the pilots, the shoe was slightly that largely refutes this version. Packing starched collar and silk shirts, O. Schmidt expedition discovered in 1929 on the basis of Teplitz Bay, do not cause particular surprise. But ladies' shoes, the more Russian-made, could hardly belong to the foreigners.

Expected visit Teplitz Bay of the crew of "St. Anna" has even less likely here. Akkuratova assumption of the accessories shoes of Sedov, he could take in order to leave a symbolic mark on the North Pole, also finds no documentary evidence. The only credible witnesses here can be Linnik, Pustoshny and wife Vera Valeryanovna Sedova. Who does not like, they knew the secret intentions of Sedov.

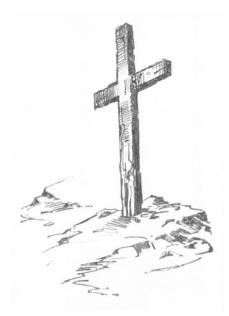
Skipper Akkuratov in his time could solve this issue very easily. He needed only to meet with Vera Valeryanovna who lived in Leningrad, and to tell her about his discovery. And if the description she identified her shoe, then this evidence would be so loud that undoubtedly led to a revision of all the events pole campaign, and sailors in the 30-ies. The last century have been convicted of lying and likely charged with a crime. But this did not happen. Pilots in the heat of the cases of the national importance appear to have forgotten about the discovery in the Bay of Teplitz and slipper for many years remained. In addition, at Cape Auk were soon found fragments of things of Sedov.

As for the sailors, they noted in their diaries all note worthy moments of travel, but none of them did not mention about this unusual circumstance. After the death of the chief, reviewing everything that was on three sleds, they decided to leave part of the equipment, while the most valuable takeaway. "All the same tools, appliances because of their value - Linnik wrote on Febru-

ary 22 - and most importantly, perhaps, need to ship, to take back, but from the first critical moment". Moreover, sailors pointed to "chronometric clock", which they removed from the body of his boss, and cleaved pieces of the headstone for his wife Sedov. About the shoes is no single line. Thus, the balance of probabilities is not in favor accessories shoes of Sedov, and therefore regards it as a proof of the residence on the basis of the Abruzzi sailor's impossible.

From all this, it follows that to date there is no real evidence that could cast doubt on the testimony of the sailors. There are only versions hypotheses and assumptions that are based on a single fact - Sedov grave at Cape Auk! All attempts to further our understanding of what actually happened at the Rudolf Island, is unlikely to be successful without a comprehensive research there, which should include diving operations in the coastal strip of Cape Auk, in the definition of the probability of vanishing glaciers, avalanches and the impact of these factors on the relief foot cliffs of Cape Auk. Parallel to this, it is necessary to hold a series of the forensic examinations of the fragments of the clothing and canvas bags, which are exhibits Arctic and Antarctic Museum in St. Petersburg, the presence of traces of chopped tissue and possible biological residues. Only the results of these studies could provide answers to many questions related to the burial place of the actual head of the first metatarsus Russian expedition.

Besides being engaged in the investigation of this case can not be sure of the infallibility of one, as you can not blame others, without adequate justification.



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## ТРАНСФОРМАЦИЯ ТЕРРИТОРИАЛЬНО-ПОСЕЛЕНЧЕСКОЙ СТРУКТУРЫ КАК ФАКТОР ИЗМЕНЕНИЯ ЧИСЛЕННОСТИ СЕЛЬСКОГО НАСЕЛЕНИЯ В АРХАНГЕЛЬСКОЙ ОБЛАСТИ

## TRANSFORMATION OF THE TERRITORIAL AND SETTLEMENT STRUCTURE AS A FACTOR OF THE CHANGE OF THE NUMBER OF COUNTRY PEOPLE IN THE ARKHANGELSK REGION



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Аннотация. В статье представлен анализ результатов изучения вопроса о трансформации территориально-поселенческой структуры в Архангельской области как факторе изменения численности сельского населения в период между переписями населения 1926—2010 гг.

**Ключевые слова:** трансформация территориально-поселенческой структуры в регионе, типы сельских населенных пунктов, динамика изменения численности сельского населения, переписи населения

**Abstract.** The analysis of the results of studying the question of a role of the transformation of the territorial and settlement structure in the Arkhangelsk region as a factor of the change of number of country people during the period between population censuses of 1926–2010 is presented in the article.

**Keywords:** transformation of the territorial and settlement structure in the region, types of rural settlements, dynamics of the change of the number of country people, population census

How does the transformational changes taking place in the territorial settlement structure of the Arkhangelsk region since its formation in 1937, the livelihoods of its rural population? As varied population in the region under the influence of the restructuring process and network types of rural settlements? Finally, as reflected effects of the transformational policies of the government on the socio-economic and demographic development of the territory of the region, which we call the countryside?

All the above issues have been raised by us and remain the subject of the research in the Northern Regional Studies. We call attention to several thorough, in our opinion, the work on this topic. The first contains a thorough characterization of the problems of the economic and demo-

graphic development of the Arkhangelsk region in the 60-70s of the last century. He performed the laboratory team of the population and workforce Geography Research Institute of Leningrad State University and has not lost its relevance in the present time [1]. In the second study analyzed the impact of the social issues in the terms of the Arkhangelsk region in the demographic processes, the health of its population [2]. Deep analysis of the socio - economic and demographic processes and their impact on the different spheres of the society in the north during Gorbachev's perestroika and market reforms in the post-Soviet society is presented in the monograph of Professor of NArFU A. A. Dregalo, V. I. Ulyanovskiy [3].

In my article focuses on the studying the effect of the restructuring of the network and the types of the settlements in the rural areas of the Arkhangelsk region in 1939-2010 years to change the rural population. Censuses provide an opportunity to make the classification of the settlements in the rural areas of the Arkhangelsk province (region - from September 1937). Transformation processes taking place in the territorial settlement structure of the region, had a significant impact on the adjustment of the types and subtypes of the human settlements, the total number of which varies during the investigated period: 1920 - 46, 1939 - 104, in 1959 - 70, 1989 - 19 2010  $-13^1$ .

At the same time, we analyzed the changes that occurred during the study period in the two major groupings of the settlements: urban and rural settlements. The first is represented by two types of the settlements - the city and the urban settlement (previously - the factory, the workers' settlement). Second – is the rural settlements include settlements, which located in the rural areas (151 types and subtypes). It is conventionally subdivided us the following groups:

- a) Historically types of the rural settlements (village, town, hamlet, settlement, etc.).
- b) Settlements for agricultural purposes.
- c) Settlements industrial and household use.
- d) Settlements purpose vehicle and its infrastructure.
- e) Other types of the rural settlements, including subgroups.
- f) Settlements of the social sphere.
- g) Settlements of the housing and household type.
- h) Settlements of the barrack-barrack type.

<sup>&</sup>lt;sup>1</sup> Источники: Список населенных мест Архангельской губернии на 1 мая 1922 года. – Архангельск: Типография Архгубсоюза Кооперативов, 1922. 302с.; ГААО, ф.1892, оп.1, д.697; оп.4,д.71; ГААО, ф.1892, оп.25, д.4885; данные территориального органа Госкомстата РФ по Архангельской области (1959,1989г.); Сельское население Архангельской области. Итоги Всероссийской переписи населения 2010 года. Статистический сборник. Т.2. - Архангельск: Архангельскстат, 2012. 128с.

- i) Settlements of the geographical destination.
- j) Settlements of the for religious purposes.
- k) Settlements of the official purposes.

In group a) historical types of the rural settlements Census 1920 includes 7 types in 1939 and 1959, their number 6, in the years 1989-2010 - 4. Group b) settlements for the agricultural purposes were 14 types and subtypes of the human settlements. Dynamics of the changes in the types as follows: 1920 - 2, 1939 - 9, 1959 - 6, 1989 and 2010. None. Under c) settlements of the non agricultural, there were 29 types and subtypes of the rural settlements, including: 1) settlements and the construction for the industrial use -11; 2) settlements timber industry -11; 3) local settlements (artisanal) industry -7. In the census of 1920 recorded in this subgroup 5 types of rural settlements, in 1939 - 15, 1959 - 17, 1989 - 4, which by 2010 had ceased to exist. The group d) settlements transport purpose and its infrastructure is included in the total of 24 types and subtypes of the rural settlements, for example, station, port, wharf. Of these, only five have served as objects of the 2010 census. Another group e) includes subgroups other types of the rural settlements.

Selection in a separate subgroup of the rural settlements points and stations due to the fact that in the 1939 census they are treated as separate types of the settlements. However, it should be noted that the word "point" is ambiguous. Under the paragraph of V. I. Dahl understands them "a place exactly signified (the assembly point for troops)". In the "Dictionary of Russian language" S. I. Ozhegova point - this place is designed for something different and something. It is easy to see that the word "point" at the V. I. Dahl can be seen in the narrow, while S. I. Ozhegova - in the broadest sense. With regard to the semantic meaning of the word "land", under it is the piece of land area occupied by anything or intended for anything (forest area).

In this case, we will uphold the view V. I. Dahl essence of the word "point", given its fairly widespread use in the census in 1939 - 20 subtypes (for comparison plot - 6 subtypes). Typically, this word means a place associated usually with a temporary stay of the population and the implementation of its various types of the professional activities. Note the rather interesting subtype of the village this subgroup - subparagraph that is present only in the 1939 census. On his appointment can express different assumptions as reference material information about it is practically absent.

<sup>&</sup>lt;sup>2</sup> Даль В.И. Толковый словарь живого великорусского языка: Т.3: П. М.: Русс. яз., 1989. С.538.

<sup>&</sup>lt;sup>3</sup> Ожегов С.И. Словарь русского языка/Под ред. докт. филол. наук, проф. Н. Ю. Шведовой. 13-е изд., испр. М.: Рус. яз., 1981.С.562, 572.

In a subgroup of the social settlements in the survey fell 14 types and subtypes of the rural settlements. In the census of 1920 marked one location, the greatest number of them recorded in the 1939 census - 9, 1959 - 4, 2010 - one.

Materials censuses allow us to distinguish as a separate subgroup of the rural settlements in the Housing type. It's pretty tightly correlated with subgroups "points and plots". However, a significant difference between the two is that in the first case we are talking about housing as a condition of the life of its inhabitants, the second – is on the location of the dwelling. 22 type and subtype were the objects censuses. Currently, the main types of dwellings – are house tent - retained their traditional names.

Allocation as a separate subgroup settlements of the barrack-type due to the fact that it does not appear as a separate object of the study. Its name emphasizes the specific nature of these settlements. It's very accurately expressed the writer V. S. Pikul in his novel "From the impasse": "Freedom ends where human being relocated to the barracks" [4, p.100]. This statement can be fully attributed to the type locality as barracks, which was the subject of the statistical observation in all censuses. By 2010, there was one type - this railway barracks, which now serves more as a historical relic of the former Soviet society than residence in population.

Last subgroups of the rural settlements formed of 12 types of the settlements, of which there are currently only only one - the island. All the others lost their status of the settlements (places). These include religious settlements (monastery, deserts, and skit) and service use (village council, etc.).

In the classification of the rural settlements for the period between the censuses of 1920 and 2010 in the Arkhangelsk region underwent major change. Of the 151 types and subtypes of the settlements currently has seven major types of the communities: 1) in the first group of urban settlements - city, town, urban, and 2) in the second group - the village, town, village, hamlet, railway settlement. The dynamics of population change on the main types of the settlements in the Arkhangelsk region is characterized by the following parameters (Table 1).

Table 1

The population dynamics of the Arkhangelsk region according the main types of the population

	According of the census of the population							
	The number of population in the sur-							
Types of settlements	veyed settlements			In the percentage to 1939				
	1939 г.	1959 г.	1989 г.	2010 г.	1939 г.	1959 г.	1989 г.	2010 г.
Urban settlements								

Cities <sup>4</sup>	388625	511572	955381*	823443	100,0	131,6	245,8	211,9
Settlements of the ur-	44530	156615	196760	104241	100,0	351,7	441,9	234,1
ban type(work settle- ments) <sup>5</sup>								
		R	ural settler	nents <sup>6</sup>				
Villages	514048	341999	176812	116347	100,0	66,5	34,4	22,6
Pochinki	39130	49918	71940	55507	100,0	127,6	183,8	141,8
Settlements	5587	314	-	-	100,0	5,6	-	-
Bowery	3448	1047	70	46	100,0	30,4	2,0	1,3
Villages of all types	70561	159378	160754	123268	100,0	225,9	227,8	174,7
railway	15507	7890	6097	2913	100,0	50,9	39,3	18,8
Other types	27866	1639	183	598	100,0	5,9	0,7	2,1
Pochinki	1901	124	-	-	100,0	6,5	-	-
Subvillages	6881	-	-	-	-	-	-	-
Lands (forest)	3228	5878	-	1	100,0	182,1	-	-
Baracks	2183	262	24	23	100,0	12,0	1,1	1,1
*without city Mirniy	·					·	·	

Referring to the analysis of the data obtained for each subgroup surveyed rural settlements in the district section.

Village. In 2010, they lived 116772 inhabitants or 22.7% from the level in 1939 (5,140,348 people). Lower than the average index of the situation observed in the villages Leshukon (12.2%), Konoshsky (13.3%), Nyandoma (14.4%), Lensky (15.0%), Nenets Autonomous District (16.5%), Vilegodsky (18.3%), Kotlassky (20.8%) districts indicators of the decline exceeded the average regional villagers. Consistent with the regional level of the performance and Vigogradovskogo Mezenskogo areas. In Pinezhsky and Primorsky regions population in 2010 was, respectively, 57.3% and 56.6% from the level in 1939, slightly less than half in Velsky (49.3%) and Kholmogorsky areas (49.2%). In other areas of the analyzed index fluctuated between 26,0-30,0% (Onega,

<sup>&</sup>lt;sup>4</sup> Источники: 1926 г. – ГААО, ф.1892, оп.12, д.32, л.3-4; оп.4, д.26, лл. 12,14,16,17,20; 20об.,26,26об.; 1939г. – ГААО, ф.1892, оп.1, д.697, л.л.4а-4аоб.,10,11,38,64,90,93,101,140,173; 1979 г. – ГААО, ф.1892, оп.25, д.4885, лл.8-22; 1989 г. - ГААО, ф.1892, оп.27, д.18, лл.3-9; 2002 г. – данные предоставлены отделом населения территориального органа Федеральной службы государственной статистики по Архангельской области; Итоги Всероссийской переписи населения 2010 года. Численность и размещение населения Архангельской области. Стат. сб. Т.1. – Архангельск: Архангельскстат, 2012. С.9-11.

<sup>&</sup>lt;sup>5</sup> Источники: ГААО, ф.1892, оп.12, д.32, л.3-4, оп.4, д.26, лл.10,17; (1926 г.); ГААО, ф.1892, оп.1, д.697, л.л.4а-4аоб.,10,11,38,64,90,93,101,110-121,140,173 (1939г.); ГААО, ф. 1892, оп.24, д.5703, лл.3об,4,4об. (1959-1979 гг.); ГААО, ф.1892, оп.25, д.4885, лл.8-22 (1979 г.); ГААО, ф.1892, оп.27, д.18, лл.3-9 (1989 г.); материалы переписей 1959, 2002 гг., предоставленные автору отделом населения территориального органа Федеральной службы государственной статистики по Архангельской области; Итоги Всероссийской переписи населения 2010 года. Численность и размещение населения Архангельской области. Стат. сб. Т.1. — Архангельск: Архангельскстат, 2012. С.9-11.

<sup>&</sup>lt;sup>6</sup> ГААО, ф.1892, оп.1, д.697; оп.4,д.71,л.1; ГААО, ф.1892, оп.25, д.4885, л.3об.; данные территориального органа Госкомстата РФ по Архангельской области (1959,1989г.); Сельское население Архангельской области. Итоги Всероссийской переписи населения 2010 года. Статистический сборник. Т.2. - Архангельск: Архангельскстат, 2012. 128с. (расчеты автора).

Kargopolsky, Krasnoborsky areas) to 33,4-37,9% in Ustyansky, Verkhnetoemsky and Shenkursk areas.

Village. Population dynamics of the population who is living in the rural settlements in this group was positive in the period between the censuses of 1939 and 1989 - from 39,130 to 71,940 people, or 1.8 times. In Kargopolsky, Konoshsky, Nyandomskiy areas this type of the rural population type absent since 1939. By 2010, they were joined by two districts - and Vinogradovsky Kotlassky. Census 2010 recorded a decrease in the number of the villagers, compared with 1989, 16433 people. This negative trend is observed for all the rural areas, especially Primorsky, Mezenskogo, Lensky, Leshukonskiy, Belsky, and Kholmogorsky.

Settlements. As a type of the rural settlements are regarded as settlements Novosyolki, separated and occupied wasteland or Zapolie. In this V. I. Dahl clarifies that we are talking about someone eviction, relocation, withdrawal or transfer from one place of the residence to another <sup>7</sup>. Clarification is quite remarkable, especially for the Soviet state 30 years of the twentieth century, when the removal and resettlement of the citizens was normative rule in the country in which to breathe so freely Soviet man. In the Arkhangelsk region in 1939, there were 149 settlements, inhabited by 5587 people. This type of the settlement was submitted to the Nenets Autonomous District and 11 rural areas. In Ustyansky area were 84 or 56.4% of settlements with a population of 3332 people or 62 % of the total. Minimum number of the inhabitants was four people in one of the settlement, the maximum - 524. In 1959, the five districts of the region left 100 people living in 14 settlements.

*Pochinki*. The dictionary of V. I. Dal fixes treated as initiative, beginning. In this case the meaning of the word is quite broad: the beginning of a new tab or land in the forest, and with him, and occupancy. At the same time synonymous with "pochinki" are the words "settlement" novoselok<sup>8</sup>. This type of the rural settlement was in 1939 in two areas of the Arkhangelsk region: Cherevkovsky - 63 fix with a population of 1901 people, Ustyansky - 2 fix with 419 residents. By the 1959 census fixes exist in two areas - Ustyansky (2 n / -41 people). Krasnoborsky and (2 n / a - 83 pers.). Cherevkovsky area at this time was disbanded, and part of its territory ceded to the two above-mentioned areas. In census years 1989-2010, this type of the rural settlement does not occur.

<sup>&</sup>lt;sup>7</sup> Даль В.И. Толковый словарь живого великорусского языка: Т.1: А-3. М.: Русс. яз., 1989. С.312-313.

<sup>&</sup>lt;sup>8</sup> Даль В.И. Толковый словарь живого великорусского языка: Т.3: П. М.: Русс. яз., 1990. С.370.

Farms. Under a farm is a separate plot of land to the estate owner. In Ukraine, the Don and Kuban – is a small peasant village<sup>9</sup>. According to the census in 1939 in the Arkhangelsk region, there were 260 farms with a total of 3448 people. This type of population in the rural item is found in all regions, except Karpogorskogo, Lensky Leshukon, Mezenskogo, Pinezhskiy and Nenets Autonomous District (1 farm with eight residents). There are several groups in the rural areas, taking into account the number located in these farms and their inhabitants. The first group included four districts with a population of the farms of 201 to 700 people. It distinguishes Ustyansky and Belsky areas respectively had 43 farms with 646 people and 33 farms with 473 residents. The second group consisted of seven districts with a population of farms from 101 to 200 people. In the third group were nine areas in which farmsteads were up to 100 people. On average, rural areas on one farm residents accounted for 12.8: Minimum number - 9. Maximum – 88 people. In subsequent decades, the number of the farms declined inhabitants: 1959 - 1047 people, 1989 - 70., 2010 - 46 people. To the level of 1939, the ratio was 30.4 %, 2.0 % and 1.3%.

Villages. According to the 1959 census, the population of the settlements increased to 159, 378 people, or 2.2 times compared with 1939. It has not changed in 1989, as an increase of 1376 people. Between the censuses of 1989 and 2010, the population of the settlements decreased from 160,754 people up to 123,268 people or 23.3%. The situation could be even worse if some townships are not transferred to the status of the rural settlements. In terms of the regions observed several trends, both positive and negative nature. The first positive trend reflects the growth of the villagers in the 1939-1959 years. However, in the period between the censuses of 1959 and 1989 it has been preserved only in the Nenets Autonomous District, Vinogradovskiy, Konoshsky, Onega, and Plesetsk Pinezhsky areas. In the transition to a market economy in 2010 census recorded a negative trend of the population decline in the NAO and towns in all rural areas, excluding Primorsky region.

Rail locations. Throughout the study period the population in this group of the rural settlements steadily waned: with 15507 people in 1939 to 2913 people in 2010. New railway items appeared in the 1939-1989 years in Vilegodsk and Ustyansky, Kholmogorsky areas. Population growth observed in 1959-1989 years in Ustyansky and Onega areas. In the next two decades, a tendency to reduce residents in the railway settlements typical for all ten rural areas where they are located.

<sup>9</sup> Ожегов С.И. Словарь русского языка...С.774.

Other types of the rural settlements. The greatest number of the rural settlements in this group there were in 1939 - 800, of which 379 or 51.9 % were Nenets Autonomous Okrug. On the territory of the rural housed respectively 350 or 47.3% of the total. In the former area was 91 Cherevkovskogo village (11.4%), in four areas - from 21 to 30 settlements (Varna - 27, and former Verkhnetoemsky Emetsk - 24, Plesetsk - 22). In eight areas of their number ranged from 11 to 20, in other - less than 10. In this group of the settlements lived, according to the 1939 census, 20,985 people, of which the Nenets Autonomous District - 8835 people (42.1%) in the rural areas - 11,911 people (56.8 %). In the group of the districts "leading" position occupied former Cherevkovsky (18.8%) and Ustyansky District (8.7%) of the total population. The records census years 1959-2010, in this group occurred most intense process of the transformation of the rural settlements and outflows of them. By 2010, left in the region of 2.2% of the rural settlements of the total in 1939, while the population amounted to 2.8%.

Referring to the analysis of quite specific group of the rural settlements, to which we referred subparagraphs, land, huts and barracks. We are talking about the types of the settlements characteristic of barrack socialism, which were objects census years 1939-1959. Its share in the rural population of the region is expressed by the following data: 1939 -12 292 people or 1.8% of the total population, 1959 - 6140 people (1.1%), 1989 - 2010 - 0,005-0,007%.

Subparagraphs as the type of the Community type operated in the Arkhangelsk region between censuses in 1939 and 1959. Those, according to the 1939 census, there were 70 in which lived 6881 people or 1% of the total rural population of the region. Regional index exceeded the Plesetsk (6.2%), Pinezhsky (4.6%), Konoshsky (3.5%), Kargopolsky (3.3%), Emetsk, Karpogorskom and Nyandomskiy (2% each) areas. Minimum number of people living in one paragraph was 5 people in the Primorsky region, maximum - 441 people in Karpogorskom area.

Population settlements of barrack - type was not numerous. Its share in the total population of the region was in 1939 - 0.2% (2183 people), in 1959 - 0.05% (262 pers.). In 1989 and 2010 in this subgroup of the rural population lived on 24 points and 23 residents. Cantonment type of the settlements in 1939 took place in eight areas, especially in Shenkursk (632 pers.), Barracks - three (Konoshsky, Nyandomskiy and Plesetsk). In the 1959 census as a barracks type of the settlement absent barracks settlements were recorded in five districts and in 1989 and 2010 - in Ustyansky area.

"Policeman" type of the rural settlements was extended in 1939 in the Nenets Autonomous District and seven districts of Arkhangelsk Oblast, in 1959 - in five districts. In 1939 they lived 3228 people or 0.5 % of the total rural population. In Priozerny district, the figure was 1,057 people

(3.5%), Vinogradovskiy - 689 persons (2.6%), Plesetsk - 775 people (2.4%). According to the 1959 census, in the settlements of this type lived 5878 people or 1% of the total rural population. In Verkhnetoemsky district, the figure is 10%, -2.8 % Velsky, Vilegodsk - 2.4%. In the census of 1989 and 2010 sites do not occur as an object of the statistical observation.

Generalize our findings from censuses years 1939-2010 presented in Table 1. On a positive note the trend of population growth in 1989, compared with 1939, in the cities - in 2,4 times, townships - 4.4 times, settlements of all types - 2.3 times, sat down - in 1.8. However, during this period remained almost without inhabitants, such types of the land settlements, items, settlements, farms, barracks, plague and camps, social infrastructure. Rural population in the villages decreased almost two-thirds. If we take the time interval between the censuses of 1989 and 2010, there is a clear negative trend of reducing urban and rural population in all major types of the settlements. In cities, this reduction was 13.8% in the rural areas - 22.8%, in the villages - 34.2%, in the settlements of all types - 23.3%, in the townships - 47.0%, in railway settlements - 52.2%.

Analysis of the results of the population censuses allow us to express discreetly assumption that transformational changes in the structure of the territorial settlement for the individual groups and types of the rural settlements in the region contributed reduction in the rural population and had a significant impact on the migratory behavior of the rural settlements.

Of no less interest is the examination of the dynamics of the rural population in the context of the administrative-territorial entities in the region - the Nenets Autonomous District and rural areas. Temporal boundaries study covers the period between the censuses of 1926-2010 years. Using census in 1926 was made possible due to the recalculation of its results, the implementation of the regional management within the boundaries of the national economic accounting administrative territorial division of the Arkhangelsk region on January 1, 1939. As shown in Table 2 below are not included statistics Lalsk, Oparinskaya Podosinovets areas and transmitted in the early 1940s, part of the Kirov region.

The general trend in the dynamics of the changes in the rural population in the Arkhangelsk region during the study period remains negative. In 1939 it amounted to 90.9% from the level in 1926, in 1959 - 75.9%, in 1989 - 56.2%, in 2010 - 40.1%. In general, the rural population in the region decreased by 2.5 times in rural areas - in 2 times. In the Nenets Autonomous District in relation to the maximum number of the rural residents in 1939 was the reduction in 2010 of 59.5%, whereas the level observed in 1926 to grow by 17, 2%.

Table 2

(1926-2010)10

Based on census data (within the administrative boundaries in the year of Census but the 1959 census)							
	1926	1939	1959	1989 г	2010	2010 to	to 1926
						max	
Region*	744363	676843	564894	418120	298653	40,1	40,1
NAO	11564	33496	20061	19576	13551	40,5	117,2
THE SUM OF THE			540777			38,9	38,9
REGIONS	710196	634851	340777	386641	276299	30,3	30,3
Velskiy	33634	33114	46486	31303	24961	53,7	74,2
Verhnetoemskiy	32492	26886	33685	24850	17060	50,6	52,5
Vilegodskiy	29954	27207	23002	16729	11158	37,3	37,3
Vinogradovskiy	31494	25977	24306	14935	10735	34,1	34,1
Kargopolskiy	22100	29741	24306	12428	8252	27,7	37,3
Konoshskiy	22929	30934	16184	14531	13674	44,2	59,6
Kotlasskiy	54645	31711	24929	13941	11932	21,8	21,8
Krasnoborskiy	29135	23909	30329	20506	13815	45,6	47,4
Lenskiy	17168	19376	28267	15591	8785	31,1	51,2
Leshykonskiy	15975	16419	16791	15788	7979	47,5	49,9
Mezenskiy	15309	13781	9318	7948	4173	27,3	27,3
Nyandomskiy	23947	30128	17304	12465	7888	26,2	32,9
Onejskiy	29527	18962	13152	14522	11131	37,7	37,7
Pinejskiy	25290	17573	28718	36137	26978	74,7	106,7
Plesezkiy	17268	32178	24923	33611	15622	46,5	90,5
Primorskiy	18183	24250	45517	26007	26327	57,8	144,8
Ustiyanskiy	42143	35015	42447	25655	21274	50,1	50,5
Holmogorskiy	30309	30152	47196	32959	25061	53,1	82,7
Shenkurskiy	32681	19064	25654	15305	9494	29,1	29,1
* Based on cer	nsus data	(within	the admi	nistrative	boundaries	in the	year of
Census but the 1959 c	ensus);						
** in 1026-1020 — Parasnikovskiy ragion:							

<sup>\*\*</sup> in 1926-1939. – Beresnikovskiy region;

In the context of the rural areas the situation is ambiguous. For its analysis, we calculated two measures: the first – is the ratio of the rural population by the 2010 census in the district (NAO) to the population census in 1926, the second – is the ratio of the rural population by the 2010 census in the district (NAO) to the maximum number of the rural population (data in the table in bold). The calculation results are summarized in Table 3.

We draw attention to one very important point in the analysis of the statistical data presented in the table. When converted to the 1926 census results in the administrative boundaries Rural January 1, 1939 in six of them (Vilegodsk, Vinogradovskiy, Kotlassky, Mezensky, Onega and

<sup>&</sup>lt;sup>10</sup> Источники: 1926 г. - ГААО, ф.1892, оп.4, д.25, лл.3-4; 1939 г. - ГААО, ф.1892, оп.1, д.697; ГААО, ф.1892, оп.25, д.4885, л.3об.; 1959 г. - данные территориального органа Госкомстата РФ по Архангельской области; 1989 г.-ГААО, ф.1892, оп.27, д.19; Сельское население Архангельской области. Итоги Всероссийской переписи населения 2010 года. Статистический сборник. Т.2. - Архангельск: Архангельскстат, 2012. 128с. (расчеты автора)

Shenkursk) was the maximum size of the rural population. According to the 1939 census, the maximum number of the rural residents was achieved in three areas (Kargopolsky, Konoshsky and Nyandomskiy). In 1959, the number of the districts with index "max-population" was Belsky, Verkhnetoemsky, Krasnoborsky, Leshukonsky, Maritime, and Ustyansky, Kholmogorsky areas. Of these, six districts, except Leshukon, rural population growth due to the increase of their territories, due to restructuring of the administrative-territorial units (districts). Note that Shenkursky district was transferred to the several rural councils, however, the growth of the rural population was insignificant and the "threshold" of the maximum level in 1926 was not surpassed. A similar situation was observed in Pinezhsky area, compiled of the former Kargoporsky area. By combining population exceeded the levels in 1926 and 1939. Indicator "max-population" made in the areas Pinezhsky and Plesetsk in 1989.

The first group included areas where indicators were lower of the middle level - 38.9%. It includes areas: Kotlassky (21.8%), Nyandomskiy (26.2%), Mezensky (27.3%), Kargopolsky (27.7%), Shenkursky (29.1%), Lensky (31.1 %), Vinogradovsky (34.1%), Vilegodsk (37.3%), Onega (37.7%). In this group, in the period 1926-2010's happening most intensive reduction of the rural population.

A second group of the areas where the rural population amounted to 2010 from 44.2% to 60.0% of its maximum level. Among them: Konoshsky (44.2%), Krasnoborsky (45.6%), Plesetsk (46.5%), Leshukonsky (47.5%), Ustyansky (50.1%), Verkhnetoemsky (50.6%), Kholmogorsky (53.1%), Belsky (53.7%), Seaside (57.8%).

The sole representative of the third group became Pinezhsky District. In it to 2010 population, compared with the maximum level to 1989, decreased by 25.3% and exceeded the level of 1926 by 6.7%.

Referring to the issue of the rural population changes in the Arkhangelsk region in the periods between censuses. We have identified four of: 1939 and 1926, 1959 and 1939, 1989 and 1959, 2010 and 1989 statistics are summarized in Table 3.

Pay attention to the place which had a negative trend decrease of the rural population in the whole region and its rural areas. In this case it is particularly evident in the period between censuses in 1959-1989 years and 1989-2010 years. Note also that in the transition to a market economy the number of the rural residents declined faster than in 1939-1959, respectively.

Population decline for the entire period occurred in Vilegodsk, Kotlassky and Mezensky districts. In the years 1926-1939 the rural population growth took place in seven districts (Kargopolsky, Konoshsky, Lena, Leshukonsky, Nyandomskiy, Plesetsk, and Primorye) areas. In the period 1939-1959 years, this positive trend was observed in ten districts (Velsky, Verkhnetoemsky,

Krasnoborsky, Lena, Leshukonsky, Pinezhsky, Primorye, Ustyansky, Kholmogorsky, and Shenkursk). In the years 1959-1989 the growth of the rural population for the fixed-only Onega, Pinezhsky and Primorsky regions in 1989-2010 years - only in the Primorsky region.

Table 3

The comparison of the rural population of the Arkhangelsk region
in the period between the censuses of 1926-2010

Census but the 1959 census)							
	The comparison						
	1939 г. и 1926 г.	1959 г. и 1939 г.	1989 г. и 1959г.	2010 г. и 1989 г.			
Region*	-67520	-111949	-146774	-119467			
NAO	21932	-13435	-485	-6025			
THE SUM OF THE REGIONS	-75345	-94074	-154136	-110342			
Velskiy	-520	13372	-15183	-6342			
Verhnetoemskiy	-5606	6799	-8835	-7790			
Vilegodskiy	-2747	-4205	-6273	-5571			
Vinogradovskiy	-5517	-1671	-9371	-4200			
Kargopolskiy	7641	-5435	-11878	-4176			
Konoshskiy	8005	-14750	-1653	-857			
Kotlasskiy	-22934	-6782	-10988	-2009			
Krasnoborskiy	-5226	6420	-9823	-6691			
Lenskiy	2208	8891	-12676	-6806			
Leshykonskiy	444	372	-1003	-7809			
Mezenskiy	-1528	-4463	-1370	-3775			
Nyandomskiy	6181	-12824	-4839	-4577			
Onejskiy	-10565	-5810	1370	-3391			
Pinejskiy	-7717	11145	7419	-9159			
Plesezkiy	14910	-7255	8688	-17989			
Primorskiy	6067	21267	-19510	320			
Ustiyanskiy	-7128	7432	-16792	-4381			
Holmogorskiy	-157	17044	-14237	-7898			
Shenkurskiy	-13617	6590	-10349	-5811			
* including rural settlements subordinate administrative authorities of cities and urban settlements							

Based on census data (within the administrative boundaries in the year of

Presented in Table 3 data allow to identify for each area the interval between censuses, which was the largest decline in its population (max-rate decrease). In Kotlassky, Onega and Shenkursk areas max-rate decline was highest in the 1926-1939 years. In Mezensky, Konoshsky Nyandomskiy areas and he was typical of the period of 1939-1959 years. The biggest "loss" in the

rural population occurred in the years 1959-1989 in twelve rural areas. This group included Belsky, Verkhnetoemsky, Vilegodsk, Vinogradovsky, Kargopolsky, Krasnoborsky Lenski, Maritime, and Ustyansky Kholmogorsky areas. The last time interval (1989-2010 years) with a maximum decrease in the rural population reached Leshukonsky, Pinezhsky and Plesetsk areas.

To summarize. As a result of the restructuring of the network of the rural settlements in the Arkhangelsk region of 151 types and subtypes of the urban and rural settlements that existed in the 20-30s of last century, left seven major types: city, urban-type settlement, village, town, village, hamlet, railway settlements of. Consequences of the transition from the variety of elements in the territorial structure of the settlement of this northern region to its unification, expressed not only in the reduction of rural settlements of all types and subtypes, but also to profound changes in the rural population. As our analysis shows, these changes were a significant part of rural people who due to circumstances had to solve the problem of the choice of their future life prospects.

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# СОВЕТСКИЙ ОПЫТ МОБИЛИЗАЦИОННЫХ РЕШЕНИЙ В ОСВОЕНИИ АРКТИКИ И СЕВЕРНОГО МОРСКОГО ПУТИ В 1930—1950-Е ГГ.

# THE SOVIET EXPERIENCE OF THE MOBILIZATION DECESIONS IN DEVELOPING THE ARCTIC AND THE NORTHERN SEA ROUTE IN 1930—1950 YEARS



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Аннотация. Рассматриваются проблемы мобилизационных решений в хозяйственном и военно-стратегическом освоении Арктики и Северного морского пути в 1930—1950-е гг., анализируется советский опыт реализации важных для государства социально-экономических программ в северных районах, богатых природными ресурсами

**Ключевые слова**: Арктика, Северный морской путь, мобилизационные решения, государственное управление, целевые методы

**Abstract.** The problems of the mobilization decisions in the economic and military-strategic development of the Arctic and the Northern Sea Route in 1930-1950-ies. Analyzes the Soviet experience in the implementing important for the state of the socio-economic programs in the northern areas rich in the natural resources.

**Keywords:** the Arctic, the Northern Sea Route, the mobilization solutions, governance, target methods

Exploration of the Arctic and the Northern Sea Route, Soviet government found as a major problem, the solution of which was necessary for the country's economic development and the strengthening of the strategic position of the state on the northern borders. Problems of the economic development of the northern territories were considered in the preparation of the plans for the industrialization of the USSR. On I-Union Conference on the distribution of the productive forces, which took place in Moscow in autumn 1932, the chairman of state plan Mezhlauk V.I. said that the state attaches great importance to the problems of the North and "is ready to attack on all fronts". Therefore, in the second five-year period is necessary to put "full length the problem of developing the Soviet North" [17].

In this vein, everything was present at the conference. They said that in the Arctic must be addressed primarily transport problems, which could make the North more accessible. This re-

quires the construction of the railways and roads, development of the river transport, the creation of new airlines. Another problem, which was scheduled by the scientists and representatives of the Soviet government, industrial development was relevant to the national economy of the natural resources:

Group of the North, State plan of the USSR headed by S. V. Slavin prepared, in their opinion, the concept of the socialist development of the North, which was announced at the conference, almost entirely included in its resolution became the basis for the adoption of Governmental solutions to the North in 1930-ies. Fundamental provisions of the state concept of the northern development in this period were as follows:

- a) Development of the North must completely obey the decision of the most important tasks of the national economy of the USSR.
- b) It is yet to be restrictive because of the difficulties in the northern areas of the promotion and appreciation of the work here. In the North, it is necessary to build only those enterprises, which "caused the most urgent national economic necessity and can not be built in other areas more efficiently and cost-effectively".
- c) Development of the North should be at the highest technical level, which could turn "reclaim" spots "in the real centers of the socialist economy, based on which it will be possible to further the broader development of the North".
- d) The basis of the North development should serve the old industrial areas, giving not only the machinery and equipment, but sharing experienced personnel, labor force, which in the north an acute shortage.
- e) In addition, should present a differentiated approach to the development of each region of the North. You can not treat the North as a homogeneous whole, despite some common rallying point. Problems of the North can be specifically allowed only on its separate economic complexes.

All these strategic ideas were reflected in the tasks of the second five-year plan for the development of the Soviet economy, which was included as a separate part of the section on "Development of the Soviet Arctic". In the introduction to the section stated that "from certain activities on the study and the economic development of the Arctic, we turn to the systematic, calculated on the number of years, a broad study of the industrial development and the polar regions of the Soviet Union" [5].

On this basis, in the northern assumed a larger scale than before, the development of the forest industry, the widespread use of the forest resources by local processing of wood raw material. Indicated that the northern regions should ensure scarce forest products regions of the European part of the country, Kazakhstan, Central Asia, as well as perform exports USSR.

In the field of mining planned development of apatite-nepheline ores on the Kola Peninsula, the Pechora coal basin and gold deposits in the areas of the north-east of the USSR: in the basins of the Kolyma Indigirka, Aldan, Yana and others involve large geological research program to identify mineral resources the use of which would be necessary for the development of the national economy. In 1935 construction began on the North Asian Norilsk mining and metallurgical enterprises.

Much attention is paid to the development of the transport network, which had for the development of the North essential. Specific targets were drawn up for the development of the Northern Sea Route, the development of the river transport and the construction of a number of railroads, facilitate resolution of the problems identified in the concept development of the North. It, however, there was no place for the implementation of actively discussed the idea of building a second after Transsib northern latitudinal line from Murmansk to the Sea of Okhotsk (Ayan port), the so-called Great Northern Road. After a heated discussion at a conference on the distribution of productive forces and in print, this idea was rejected as untimely and very expensive.

In our opinion, the state in this period really was not ready for large-scale development of the North, which involves the construction of the Great Northern Railway across the country, and has gone the way of so-called meridional development associated with the creation of a separate business "nests". All cost solutions were made in favor of the arrangement of the Northern Sea Route.

In December 1932 for the implementation of the planned program to address SNK was created specific organization called Headquarter Northern Sea Route (Glavsevmorput), which had the duty to "finally pave the Northern Sea Route from the White Sea to the Bering Strait, to equip this way, keep it in good condition and ensure the voyage in this way "[13, p. 9].

The activities of the new organization, the Soviet government had high expectations. It is acting on the Rights of the ministry, was to unite in their part of all who had previously worked in the Arctic organizations belonging to different departments, including the Arctic Institute, which at one time was created to study the problems of the Northern Sea Route, designated as the main scientific objectives state value. Director of the Institute Schmidt was appointed chief of NSRA.

Management was supposed to provide a comprehensive socio-economic development of the Arctic territories of the USSR using the latest means of the transport and communication, accompanied by the creation of the port communities and various manufacturing companies. With the help of the staff of the Arctic Research Institute provides for the organization of the permanent stations and polar expeditions to study the seas and islands of the Arctic Ocean, which had

promptly provide the information necessary for the development of the navigation along the Northern Sea Route. So organized expedition Lena initiated systematic cargo delivery flights from the west to the northern regions of Yakutia. It is already in 1933-1934, allowed to lead to the port of Tiksi (mouth of the Lena) large river ships to deliver goods upriver to Yakutia, in the Lena River basin, as well as pools Yana Kolyma Indigirka. Tiksi communicates through the Northern Sea Route and a major river port of sturgeon, which was later railway, was laid from Taishet Transsib to Bratsk-Ust-Kut [16, p. 16].

In the first production in 1933 NSRA activity, several things happened that required mobilization solutions. Besides regular navigation that already assessed as ordinary work in the Arctic, led by Schmidt took the first big research expedition on the steamer "Chelyuskin", which ended tragically, fortunately only for a steamer. It is not secured wiring icebreakers got adrift off the coast of Chukotka and died, crushed ice. Crew, passengers and scientific personnel, landed on the drifting ice floe. The whole world watched the rescue of Chelyuskinites, which was evaluated as a heroic event. However, the epic voyage to "Chelyuskin" showed that the USSR as a whole has not yet reached the level when sailing across the Northern Sea Route can be effective and safe. First, there is the right amount of powerful icebreakers, without which there can walk freighters. Secondly, it is necessary to develop and improve the polar aviation, which should fly over the coast and the ocean at any time of year.

Following the report by Schmidt on the expedition to "Chelyuskin" the special commission was formed under the chairmanship of Kuibyshev, which was to examine all the circumstances surrounding the development of the Arctic and the Northern Sea Route and prepare proposals for the government decision-making. As a result, July 20, 1934 was a joint decree of the SNK and the CPSU (b) "On Measures for the Northern Sea Route and the northern economy", which was essentially a program of the action mobilization of the NSRA in the Arctic in the coming years. The decision referred to the need to find ways to build new icebreakers in the USSR, seaports and radio centers, development of the polar aviation, construction of the airports and air lines, special aircraft for the Arctic, as well as measures were planned training polar different specialization. The zone of activity specific organization were classified sea and islands of the Arctic Ocean and the continental territory of the Asian part of the country, located north of the 62nd parallel ( parallel Yakutsk ) [15].

Ability to active mobilization activities was laid in the structure of the NSRA, headed by a chief appointed by SNK and controlled by him alone. When the chief as an advisory body, the Council worked NSRA consisting of the specialists, but he did not take an independent decisions.

Personal its composition formed on the proposal of the chief, who was responsible for all the activities of the Office. When the chief sector worked on the selection and allocation of personnel, accountable to him were all specialized, general and administrative departments, research, design and construction organizations, long-term ice forecasts, etc. [8, p. 243-245].

NSRA undivided structure to some extent limited only by the Political Administration, acting on the basis of the particular situation. In 1938, it included 11 political departments and party organizers released 15 polar stations and businesses, whose task is constant work with groups and individuals in all enterprises subordinate to the NSRA. Specificity of the Arctic is definitely a big demand from people restraint and responsibility that must be present and appear constantly. On the instructions of the state leadership to solve important national task associated with the development of the territories of the Far North. Party organizations in this regard have become some guiding center and mobilization mechanism not only in productive activities of NSRA workers, but also in the organization of their life in general and life in the Arctic.

At the expense of the party organizations to create certain mobilization framework across multifunctional organization. Party cells, party organizers have actively participated in the work of all departments of NSRA, ideologically and morally supported explorers. Communists were placed in leadership positions in all sectors of the management and production is a technical and ideological mobilization conductor's policy. First and could suffer from it. Repression 1930-1940 – ies often first hit by members.

Since 1934, political workers were preparing for the Arctic in a special way. In their preparation, together with the political directorate of the top leaders attended the NSRA, experienced explorers and scientists who were genuinely committed to their work and often challenged by his example wishing to work and live in the North. Great importance was attached to the so-called political studies, the organization and conduct which, along with political workers had to involve all of the leaders of the various ranks. They by the regulation on the organization approved SNK, engaged not only in the production activities of the enterprises, but also the political education of their subordinates, contributed through the introduction of the various forms of the competition to develop their labor enthusiasm, creative approach to assigned work, as well as reported by various information on the state policies about his position in the world [7, p. 29-31]. All this taken together helped mobilize people to perform state-designated targets.

In 1935-1936, held a number of high-latitude already floats on icebreakers "Sadko", "Sedov", "Maligin", "and Krasin". In 1936, the icebreaker "Litke" successfully moved from west to east along the Arctic seas two destroyers. This expedition, led by Schmidt showed that the North-

ern Sea Route may have not only transport but also important military and defense implications. Experience was used during the Great Patriotic War in the translation of military courts from the east to the west [14, p. 13].

In the second half of the 1930s, received a large development of the polar aviation. During these years, it has developed into an independent branch with its own special challenges, with experienced pilot's explorers capable of solving complex and specific tasks in the air travel in the Arctic. In connection with Chelyuskin epic was established in the USSR Hero of the Soviet Union. First received the honorary title of seven brave explorers' pilots who participated in the rescue Chelyuskinites.

In 1936, were committed long flight across the North Sea Route pilot VS Molokov on the route Moscow - Rudolf Island - Moscow pilot MV Vodop'yanov. Arctic air route along the Eurasian coast linked to Moscow the most remote bases of the Soviet Arctic, with its ports, wintering, polar stations and industrial buildings. 1937 marked historical Transarctic hops Chkalov, then Gromov of the USSR over the North Pole in North America. Held the world's first expedition to the heavy aircraft landing at the North Pole with the creation of scientific drifting station "North Pole", headed by Papanin. Since that time the aircraft Polar Aviation USSR began to perform regularly both scientific and strategic flights, away from the coast for a considerable distance. Aviation has become increasingly used for communication with the remote northern areas and wintering, delivering cargo and passengers not only in a short period of navigation, but also throughout the year.

By 1941 at the disposal of the NSRA had powerful at that time aviation throughout the Far North - from Arkhangelsk to Providence Bay. Planes could fly to Vladivostok. More than 200 aircraft with experienced crews polar pilots based in Moscow, Krasnoyarsk, Tyumen, Igarka Yakutsk Tiksi. They flew across the North to the Pole itself, provide research, ice air reconnaissance, pilotage in ice, as well as connections to remote northern settlements. By 1941 in the field of activity Glavsemorputi were regularly acting airlines: Tyumen - Salekhard, Krasnoyarsk - Dixon, Tiksi - Anadyr. In Krasnoyarsk acted Aircraft Repair Plant and school polar pilots in Nikolaev.

Building domestic icebreakers and create a powerful icebreaker fleet was a separate page in the development of the Arctic areas. Until the mid- 1930s, the Soviet icebreaker fleet consisted of icebreakers, mostly built in the pre-revolutionary period or purchased abroad. Legendary "Ermak", built in 1899, and served for a long time though (only in 1964 it was decommissioned), but no longer meet the increasing demands of the maritime transport and hopelessly out of date to the beginning of the NSRA activities. Therefore, the task was to create more powerful domestic

icebreaking fleet. Practically all Soviet icebreakers, including the nuclear, built in the postwar years, were built at the Admiralty Shipyard in Leningrad.

In the USSR, construction of the large marine icebreakers capable of conquering the Arctic ice, began in 1936 with the construction of the icebreaker "Sibir" capacity of about 12 thousand liters. The country began to occupy a leading position in the global lice breaker. At the beginning of the 1950s, the USSR was a recognized leader in the production of powerful icebreakers (more than 25 thousand liters), used for piloting in the Arctic and other freezing seas. The most significant achievement of the Soviet ice-breaking building was makingin 1959 the world's first icebreaker with a power plant on nuclear fuel - nuclear-powered icebreaker "Lenin" [10, p. 9-11].

In 1938, construction began Murmansk shipyard. In the "Komsomolskaya Pravda" and other national newspapers published an appeal NSRA leadership of the Komsomol and the appeal of the Komsomol and youth to build, which has found a warm response. Was filed on more than 30 thousand applications of the intended 20. According to the memoirs Papanin, headed at that time Glavsevmorput, plant was built with great enthusiasm and a very fast pace. At the beginning of the Great Patriotic War, he was already working at full capacity, producing all of repairs icebreakers and transport vessels USSR and Allied ships, received damage during convoys from Nazi bombs and shells [14, p. 16-17].

In the 1930s, NSRA activities spread over a vast area - from the islands of Spitsbergen and Novaya Zemlya to Chukotka. From year to year it increased state funding. If in 1933, its size was 18 million rubles, in 1937 - 400. As a result, the cost over five years by the State in Glavsemorputi totaled 922 million rubles. Total capital expenditures for the five years amounted to 465 million rubles, up from 26.4 million in 1933 to 164.5 million rubles in 1937. One third of them were aimed at the development of maritime transport, including the construction of the icebreaker fleet. More than one fifth of investments went into making polar aviation. At the same time equipped and passenger airlines Omsk - Salekhard, Krasnoyarsk - Igarka Yakutsk - Tiksi [13, p. 16].

In the 1930s, Glavsevmorput with authority on the northern issues Commissariat united efforts of the many agencies and organizations in the study and the economic development of the Soviet Arctic, which have increasingly opened their wealth to serve public purposes. On the Kola Peninsula were discovered reserves of apatite - "stone of fertility" in the pools and Pechora discovered commercial reserves of oil and coal. In Kolyma and Indighirka Soviet geologists discovered new deposits of gold, which became the basis for the creation of large gold mining companies here? We must pay tribute to the work of all services and departments exploration in the Arctic. Their work was well organized, and it did not stop during the war, especially on relevant research-

es related to the search of local kinds of fuel resources. In 1941, coal mining began in the Bay "Coal" for the supply port Providence. In 1943 it was mastered brown coal deposit in the mouth Sogo, near the port of Tiksi. In the same year was mastered coal mine at Noordwijk. Here was found rock salt, which is mined and heading for the fishing industry during the war years to significantly increase their production. Conducted oil exploration. In the basin of the Yana and near Pevek mined tin and other valuable minerals, which were exported Northern Sea Route.

Complex events in the Arctic States and assumed protection of the northern borders of the USSR. The main content of the military-strategic program in the 1930s was the creation of the Northern Military Navy. It is necessary to realize the Russian government in the late nineteenth century. During the First World War, but the problem was solved very difficult. Real actions were taken by the Soviet government with the completion of the White Sea-Baltic Canal, which connects the White Sea and the Baltic, gave vent from the Baltic to the Arctic Ocean, and through river systems became possible and access to the Black Sea and the Mediterranean, that the military and strategic immediately was rated very highly.

According to N. Zhukova, immediately after commissioning of the White Sea-Baltic Canal in summer 1933, the Soviet government decided that an urgent construction on the river. Svir linking with Onega Lake Ladoga, dams for pilotage with increased draft. Soon followed by the Commission's decision of Defence signed Voroshilov, relocating some warships from the Baltic Sea to the Black and basing them in the port of Murmansk. The newly created association Navy was initially indicated the Northern Flotilla, a few years later became the basis for the creation of the North Sea Fleet, which showed their fighting efficiency during World War II and in the prewar years could protect most of the Barents Sea, the approaches to Murmansk coast of the White Sea and throat [6, p. 320-321].

In July 1936, the Politburo of the CPSU (b) adopted a special program of the major naval shipbuilding, the main event considering building in Arkhangelsk powerful military shippard. In the shippards of the Northern Dvina estuary to be built exclusively for the Northern Fleet to January 1, 1942 two battleships, one heavy and four light cruisers, three leaders of sixteen destroyers, four large submarines, twelve and nine-speed patrol minesweepers.

However, these long-term plans outlined at the outset become adjusted. The plant was built slowly than was determined by maturity. Northern Fleet vessels replenished as needed Baltic, and sometimes transport or fishing vessels, which hastily equipped for the military.

Nevertheless, in 1941 the North Sea fleet already had its main base Vayenga (now Severomorsk) and was based in Murmansk, Arkhangelsk and other Arctic ports, consisted of a sin-

gle division of the destroyers of eight ships, had a team of underwater boats (15 ships), a compound of the patrol ships, minesweepers, patrol boats and rejectors of water region fleet's main base. Air Force fleet numbered 116 bombers, use consumers and scouts. Coastal and air defense consisted of the dozens of batteries up to 180 mm caliber. North Navy possessed bases aerodrome and coastal defense units in all major points Arctic had the adjusted with surveillance and communications [12, p. 784-85].

Active mobilization activities of the Soviet state in the north contributed to its socio-economic development. Already in the late 1930s, here there was "pockets" industry that lit, first, in the port cities, demanding appropriate industrial infrastructure. Furthermore, the possibility of product sales enjoyed building processing plants: sawmills and fish processing plants, mining and timber processing plants. Secondly, the discovery of mineral deposits of value to the national economic complex of the USSR could also be the reason for the birth of the industrial "center". In this respect, a perfect example is the creation of the Norilsk industrial complex and the city of Norilsk, which began in the connection with the development of the public deposits in Taimyr ores.

Geological survey in the area of Norilsk already in the 1920s confirmed its great commercial importance. In the expeditions of 1922-1924 under the leadership of Urvantsev were discovered large coal deposits, which coexisted with deposits of polymetallic ores. This makes the area with Norilsk industrial viewpoint is very promising. With the organization of the NSRA Norilsk prospecting expedition began to receive a lot of help and support. In particular, navigation in 1933 in Norilsk Taimyr tundra South River expedition was delivered tractors, tractors, ATV. It is much easier for drilling and exploration in general. For example, in summer 1933 ATVs have been able to carry about 3 tons of cargo and walked about 7 thousand km on the northern part of the Taimyr Peninsula, replacing the work of 243 deer and 442 dogs [4, p. 18].

By 1934 the geologists on the Taimyr Peninsula was made first count indicative of mineral deposits on nickel, cobalt and coal, which has been recognized and approved by the Central Commission for Mineral Reserves of the USSR, and therefore, the district fell into the promising national economic plans of the state. Head Glavsemorputi Schmidt April 17, 1935 prepared in the CPSU(b) a memorandum of Norilsk problem in which he wrote that Norilsk deposits power reserves of nickel and platinum is just as important as for the Kolyma gold mining, "with the same advantages for saturation valuable metals (nickel, platinum, cobalt, palladium) and similar difficulties for their development "[3. P 62-63].

Schmidt argued that, despite the difficulties of northern development, for the development of the Norilsk industrial district has a number of the favorable economic factors, not to men-

tion political. Here are concentrated in a small area of the polymetallic ore quality, coal, large amounts of fresh water flow, construction materials (lime, sand, and clay) and fluxes (quartz sand-stones). In addition, natural conditions and a high concentration of the deposits in them the necessary elements here allow you to apply the most effective methods and technology developments. Proposed to start construction in Norilsk mining factory in the spring of 1936 in three stages ending in 1940 offers Chief Glavsemorputi were taken. Soon followed the government's decision to start construction in Norilsk [3, p. 63].

In a large industrial area in the first five years became the European North. It began to develop new industries such as pulp and paper, cardboard, plywood, furniture, wood chemical, forestry and fisheries development gained new momentum. Only on the Kola Peninsula in 1926-1937 was built 39 enterprises, including mining and chemical trust "Apatite", Murmansk Fish Factory, Nivskaya and Lower Tulomskaja hydroelectric. In 1939 came into operation a large enterprise of national importance "Severonikel" which was used to provide the country with the Norilsk Combine, nickel, cobalt, copper and other nonferrous metals. European North was the main area lesoeksportnym USSR in the prewar years [11, p. 305].

Efficiency of the Northern policy of the Soviet government was proved during the Great Patriotic War, when industrial enterprises built in the prewar years, could make a significant contribution to the victory over the enemy, and the Northern Sea Route as a transportation route, became even more popular than in the peacetime.

Public policy, laid the foundation of the socio-economic and political development of the northern regions of the USSR and the Northern Sea Route, was continued in the postwar years, when already in the peaceful conditions continued all undertakings of the prewar period. Development of the industrial areas, mines and gold mines in the northern regions require a significant increase in the importation of the goods. At the same time increased the country's demand of the products manufactured in the North, the export to the export of Siberian forest, maintaining the rapid development of the island economy, which after the war was the basis of logistics The numerous research and meteorological stations and expeditions, whose task was compiling reliable weather and ice forecasting in the Arctic.

For the research projects in the postwar period, except the Arctic Institute, administered by the NSRA, joined the organization started during the war in Krasnoyarsk, Novosibirsk, and Tyumen. In the Polar Regions worked expedition West Siberian Branch of the Academy of Sciences of the USSR, organized in Novosibirsk in 1943 since 1947, and the work began on the productive forces of the region Yakut Branch of the Academy of Sciences. The focus was exploration. Recover-

ing after the war industry needed new mineral and fuel resources, which have been shown earlier geological studies; it could be on the North in the large numbers.

In Leningrad after the war was formed Academic Institute of Geology of the Arctic, which specialized in geological exploration for oil, coal, gold, ores of the various metals. As a result, high-latitude air expeditions of the late 1940s - early 1950s were discovered underwater ridges Lomonosov, Mendeleev, Haeckel. Bottom topography of the Arctic basin, contrary to established ideas appeared in the form of the complex mountain systems with deep basins and valleys. This information has been recognized by the world scientific community the largest geographic discoveries of the twentieth century. They allow understanding the laws of the motion of water masses and the drifting ice of the Arctic Ocean. Changing ideas about the structure of his bed allowed geologists suggested that the valuable minerals may be not only on its coast, but at the bottom [11, p. 64-65].

Glavsevmorput showed itself as an organization of the mobilization type, able to put into practice the national strategy of the economic development in the Arctic zone of the USSR. The Office has become an effective instrument for the implementation of the mobilization decisions related to the development of the rich natural resources in the northern sparsely populated and economically undeveloped areas of the country, among other things still needed in the military and strategic defense. Soviet experience in the creating state specific nadvedomstvennyh organizations that could simultaneously be both economic agents and offices of the government in the distal regions of the USSR, was used in the world of managerial, economic, social, geopolitical and other problems in the process of pioneering new territories [1].

General Directorate of the Northern Sea Route is proved by the organization of the mobilization type, which could become a multi-functional public institution in the Arctic, through planned economic development guide the vast territory of the polar regions of the USSR. Feature of the activity of this organ is its complex nature, expressed in the same system connecting scientific, transport, industrial and commercial functions, as well as the implementation of the specific tasks in the development of the traditional sectors of the economy and socio-cultural development in the indigenous regions of the North.

In the postwar years Glavsevmorput continued resolve important for the further development of the Arctic issues, including those related to the construction and operation of more powerful icebreakers, cargo ships have more durable than earlier cases and powerful machine installations in the Arctic with the creation of the modern airports with paved capable year round to take heavy passenger and cargo planes. At the beginning of the 1950s composed Spetsstroy NSRA was

organized, which was entrusted with the design and construction of airfields. As a result, by the end of the 1950s, P=polar aviation, which has previously worked mostly ice reconnaissance and only occasionally carries passengers, passenger traffic has increased its efforts to ensure the Arctic. In recent years, the activities of the Northern Sea Route in the early 1960s, polar aircraft carrying up to 100 thousand people per year and 3-5 tonnes of cargo. Special building were mady many airfields in the Arctic, including the airfield with concrete pavement for the city of Norilsk.

In the postwar years Glavsevmorput perhaps the first time in the history of Arctic exploration, began to attach great importance to the social construction of the North, his master new technologies. In the 1950s, Party and the Soviet government took a number of decisions on the need for the northern territories and comfortable permanent settlements in order to strengthen them in the population and skilled personnel. By this time it was developed in the practice of building construction methods building on permafrost, received special slow heat building materials. However, to realize these intentions become somewhat later, in the 1960s. When Glavsemorput already been disbanded.

In general, the USSR was a state mobilization type. Therefore, in the activities of this specific organization, as Glavsevmorput massively attended mobilization techniques, including forced and frankly based on a rigid disciplinary responsibility. They touched almost all aspects of the activities of the paramilitary organization.

In general, the USSR was a state mobilization type. Therefore, in the activities of this specific organization, as Glavsevmorput massively attended mobilization techniques, including forced and frankly based on a rigid disciplinary responsibility. They touched almost all aspects of the activities of the para military organization. Operated in the strict secrecy mode, using their enterprises basically forced labor of prisoners and special settlers. Activities of the public trust "Dalstroy" (Chief of the Construction of the Far North), seen in the 1930 -1950- ies, carried out mainly in the institutional framework of the law enforcement agencies of the USSR. Structural adjustment and reallocation of the departmental enterprises have not changed a whole mobilization purpose of this particular organization, which played at a certain historical stage of a pioneering role in the economic development and settling in the large parts of the north- east of the USSR.

Activities "Dalstroi" was not controlled by the usual organs of state administrative-territorial power provided by the Constitution of the USSR. She was subject only to the highest party and state authorities. Her work was always interested in Stalin. November 26, 1932 adopted a special resolution of the Politburo of the CPSU (b) conferred on the Chief "Dalstroi" broad powers that made him both the Chief Executive and the party leader products in the territory. In addi-

tion, he was also authorized OGPU (in 1934-1938-NKVD) of the USSR in the region. Production plans "Dalstroi" mining gold and other minerals annually approved by the special resolutions of the Central Committee of the CPSU(b) and SNK, which was defined and a list of the main activities to ensure the implementation of these plans [2, p . 37].

Magadan researcher A.I. Shirokov gives examples of failed attempts to create a territory under the jurisdiction "Dalstroy" normal state and party organs. In 1937, at a party conference" Dalstroi "several delegates proposed to reform the party organization of the Trust in accordance with the Charter of the CPSU(b), but the head of the trust E. P. Berzin reacted harshly to this proposal, saying that it is unlikely to be correct. "My personal opinion is that the party organization needs Kolyma military order ... the bulk of the labor force prisoners. That's why I say that we need an organization about military organization ... "[18, p. 24].

In 1939, at the request of the Khabarovsk Territory Party Committee and executive committee Presidium of the Supreme Soviet of the RSFSR issued a decree created as part of the Khabarovsk Krai Kolyma district with its center in Magadan, which was granted city status. However, Stalin intervened and essentially reversed that decision, declaring it "schematic and unviable." As an explanation, he stressed that "Dalstroy" - not the usual industrial management, is "... a special type of plant, working in the specific conditions of use exclusively or almost exclusively criminal people" whose "... specificity requires special operating conditions, a special discipline, a special regime ". Therefore, "in the area do not want to Kolyma Regional Committee and the Party committee at the" Dahlstrom "connected with the political department and its subordinate" [18, p. 24-25].

Thus, in the north-eastern territories of the USSR, which formally belonged to the Khabarovsk Krai, acting special regime of emergency management, including the formation in 1953 of the Magadan region? Due to tough mobilization methods through the GULAG system carried a huge economic development of the territory. The main activity in the "Dalstroi" was mining. However, the need for people in the outback terrain conducted transport, energy and other social infrastructure construction, promoted the colonization of the region. In the 1930s. actively conducted road construction, for which in 1933 organized a special control. By 1940, it was built in previously roadless areas in the basin of the Kolyma and Indigirka more than 3 thousand km of roads, several bridges had no analogues among similar structures in the USSR. Economic reference point was the port in the bay Nagaeva, built in 1933 - 1934.

Among the settlements established during the "Dalstroi", the most significant were miner settlements, where both were stationed large camp divisions. Here developing local industries,

among which the largest were related to the construction and use of local raw materials (glass, tannery, factory producing ceramic products, etc.). For food supply created state agricultural enterprises in the form of state farms and enterprises and farms camp facilities.

One of the main purposes of "Dalstroi" was building in the USSR gold mining. Here in the Kolyma-Indigirskogo pool in the first half of the 1930s worked 75 geological expeditions and parties, which was discovered more than 200 gold deposits, of which 20 were large fields with content both gold and tin, and coal deposits were found, and other minerals. Borns in the Kolyma gold industry began to build in 1937 mine "Dagger" and Utinskaya experienced concentrator. In 1940, in the Kolyma basin was produced 80 tons of chemically pure gold, its share in the total gold production of the USSR was 46.3%. Kolyma confidence among the largest gold mining areas not only in the country but also the world. In 1932-1956 years. The goldfields "Dalstroi" was produced 1187.1 tons of chemically pure gold, 65.3 thousand tons of tin concentrate, 2, 85 thousand tons of tungsten and about 400 cobalt in concentrate [18, p. 31].

According to A. I. Shirokov, "Dalstroy" in 1930-1950-ies using prisoners of the Gulag, which mines through the Kolyma-Indigirskogo Territory in 1932-1954? Passed about 900 thousand people, colonization of the exercised vast territory of the north-east of the USSR, accompanied by forced withdrawal "from the bowels of the region of the mineral raw materials" [19, p. 92].

The State, through organizations such as "Dalstroy" pursued a mobilization solutions for the extraction of the critical and unique minerals in the uninhabited and economically poorly developed areas of the country with harsh climatic conditions, geographical remoteness, lack of the transport and economic infrastructure, etc. in the normal course of business "Dalstroi" previously uninhabited huge area north-east of the USSR, rich in natural resources, was able to enter into a single national economic complex of the country, occupy a key place in it as a source of the rare minerals and gold reserves.

Development of the minerals Indigirskogo Kolyma-edge, in turn, gave impetus to the development of maritime transport of the Far East, contributed to the intensification of the traffic along the Northern Sea Route, and the social intraregional road construction, development of river and air communications. Areas covered activities "Dalstroi" along with Kamchatka had important military and strategic importance. Their settlement and economic development strengthened border and rear areas of the USSR in the Far East. Anyway, as a result of the planned voluntary-forced redistribution of the working population in the north-east of the country, who had often extraordinary nature, address the major issues of national importance - settlement of new areas and the creation of the conditions here for the further socio-economic development.

In the postwar years, gradually with the softening of the political regime and the change of leadership in the USSR organization rigidly mobilization type leaving the scene, but the methods of waste in the industrial development of sparsely populated areas remain, though much changed towards voluntary choice of people to be in a particular area of the north Siberia. The idea of creating mobilization organizations in various contexts are saved, but the organization has created a different type, although its main objectives are also designed to solve some important problems of national importance, involving, as a rule, with the construction of large energy, transport and industrial facilities by poorly developed in the economic sense of the country. So, for the construction of large-scale hydropower and associated in single industrial complex enterprises specially designed with the involvement of theseveral agencies, large organizations, such as "Bratskgesstroy", "Krasnoyarskgesstroy", "Taymyrgesstroy" etc.

"Sibakademstroy", created in the 1950s, within the Ministry of Medium Machine Building, intended not only for the construction of academic town near Novosibirsk, but also for the construction of other facilities, including secret with military defense implications. Major construction organizations established in the areas of new industrial development of Siberia also be referred to as mobilization. They acted in a specific target method emergency mode, provided with all the resources and opportunities for their activities, and performed not only industrial construction, but also in general to implement programs of the social and economic development of the territories for the period of the construction of the main town enterprises. Often the leaders of these organizations were appointed military who received the party to fulfill the task of work non-standard methods, which in the Soviet Union recognized the most effective in the northern hardly explored regions with severe climatic conditions.

In the postwar years, conservation decisions on the mobilization of the northern territories of the USSR contributed to the continued growth and strength in the world with the beginning of the "Cold War". Education NATO made it impossible for a quiet and peaceful life in the Soviet Arctic. For all the visible and invisible reasons it was seen as an important strategic military facility. Events of the last war showed that the role of the polar basin on a global scale is very large and with high probability he can continue to become a war zone. And for diplomacy he has become one. Therefore, public policy of the USSR in the Arctic in the postwar period is mainly accounted for the realities of data and remained still mobilization. Soviet experience mobilization decisions must take into account in the modern practice of the public administration of the northern territories rich in the natural resources.

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# **Ecology**

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# К ВОПРОСУ О ПОНЯТИИ ЭКОЛОГИЧЕСКОГО РИСКА. АНАЛИТИЧЕСКИЙ ОБЗОР ПУБЛИКАЦИЙ $^{1}$

#### TO THE CONCEPT OF THE ECOLOGICAL RISK. ANALYTICAL REVIEW OF THE PUBLICATIONS



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Аннотация. В статье приводится обзор некоторых публикаций, посвященных понятию и теории риска в контексте определения экологического риска за период с конца ХХ в. по 2013 г. Особое внимание уделено роли и месту теории риска, развитию «рискового» мышления в рамках парадигмы «зеленой экономики», динамике изменений понятия риска и различным подходам к определению риска в страховом и военном деле, финансовых операциях, в решении задач обеспечения продовольственной безопасности и сохранения здоровья на опасных видах производства, в науках об окружающей среде и практических мероприятиях по охране природы

**Ключевые слова:** Арктика, обзор, риск, экологический риск, вероятностный анализ риска, охрана окружающей среды, экология

Abstract. The article provides an overview of some of the publications on the theory and the concept of the risk in the context of the definition of the environmental risk for the period from the end of the XX-th century to 2013. Attention is given to the role and place of the theory of risk, the development of "risk" of thinking within the paradigm of the "green economy", the dynamics of changes in the concept of the risk and different approaches to the definition of risk in the insurance business, financial operations, the military, in the task of ensuring food safety and health in hazardous production, environmental science and the practical arrangements for the protection of nature.

**Keywords:** Arctic, review, risk, ecological risks, probabilistic risk analysis, environment protection, ecology

#### The modern riscs of the oil pollution in the Arctic

The Arctic wildlife area is of particular importance in the light of the global natural and socio-economic changes in the world today. Depletion of energy resources and the increasing availability of the Arctic marine waters are attracting more attention to energy, transport, recreational

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facilities in the Arctic region of the planet. Simultaneously, the attention to environmental security in the Arctic, which is often put at the forefront and can be an obstacle to the development of the resources of the Arctic shelf. In this context, time-needed development of the methods for assessing the environmental risks from adverse effects of the environment and recommendations to ensure the environmental safety.

In 2011, in the Pechora Sea was established operational and drilling platform in the oil field "Prirazlomnoe". Also operates in the Pechora Sea offshore ice-resistant offloading Varandey with subsea pipeline. Branches laid underwater gas pipeline from the Yamal Peninsula in the Baydaratskaya Bay. A draft of the Shtokman gas condensate field in the Barents Sea. Begins the work on the development of the north-eastern part of Prinovozemelsky shelf in the Kara Sea. Complex climatic conditions of the Arctic shelf create high natural risks to the security of the maritime infrastructure increase the cost of the projects. This adverse weather conditions: low temperatures, the probability of the strong winds, poor visibility, atmospheric icing. Of hydrological conditions should be allocated adverse sea excitement significant fluctuations in sea level due to tides and storm surges, strong currents. The risks caused by ice phenomena: strong ice compression, ice effect on structures in the form of large and giant ice floes and icebergs, ice ridges and hummocks, piles of ice on the shore ice exaration bottom earlier ice formation and many other phenomena.

Disaster in the Gulf of Mexico suggests the possibility of an increased risk of oil pollution, which is especially dangerous in the Arctic based on the availability of ice cover. Modern methodological apparatus of the risk assessment is far from perfect. Some idea of the problems with the state's ecological risk assessment can provide an article published.

### The paradigm of the «risc» thinking

Risk estimation theory began its systematic development of 40-ies XX century [1] in connection with the growing needs to ensure security in the aerospace operations and the development of the chemical industry.

This is especially clearly manifested during the development of the nuclear power, which largely contributed to the rapid progress in the field of the risk theory. Large contribution to the theory of the risk introduced British scientist FR Farmer [2], whose work initiated interest in the assessment of the social risks (see, [3]). In the cited paper attention is paid to individual and collective risks, while at the individual risk is the frequency of use of a given individual to damage from exposure to certain hazards. Collective risk - is the ratio of the individual risk to the number of the individuals affected population for a given volume.

Active development of the theory of the risk in the 80sof the last century contributed to new challenges, primarily with the development of the nuclear energy, aerospace studies (program "Apollo" catastrophe "Challenger") and the chemical industry [4]. In this, which has already become a classic, work, risk means, in accordance with [5], a set of scenarios, each of which has a probability (frequency) of the implementation and its consequences. Under numerical characteristics are understood statistics quantities such as, for example, mortality, reduced life expectancy, etc. To calculate the statistics used apparatus of the probability theory, and the procedure of the risk assessment has received the names of the probabilistic risk analysis (Probabilistic Risk Analysis).

Understanding the importance of the problem assessment of the human impact on the environment, coupled with an awareness of the finiteness of natural resources and the progress of the theory of the risk led to the development of the theory and the practice of evaluation of the natural (environmental), and in particular, the environmental risk. The main application of new ideas - the sphere of the political and practical solutions related to the management of natural resources (environmental), and in this sphere involves not only government and business, but also the general public. These problems created a new science - the "natural» sociology (environmental sociology), one of the main concepts which is the risk.

In [6], a comparative characteristics of the different approaches to the assessment of the natural risks in the context of the problems of the nature and political decision-making. In particular, according to the authors, the traditional approach to the natural risk assessment was focussed on the impact of chemical pollutants on human health. Risk assessment methodology was based on four steps: hazard identification, risk assessment of the critical dose, identification of potential objects and methods of influence, and finally integrated risk assessment. With the use of expert treatments are based on statistical estimates of the probabilities of harm to a person by natural or anthropogenic agents is the result of the recommendations for planning / management activities, taking into account a certain degree of uncertainty.

In the following approach to risk assessment was developed in two directions: in the field of social problems in the area of the environmental problems. The authors [6] note the interesting fact that the classification of formaldehyde and DDT to risky drugs held not by the analysis of mortality, disability, or harm to the environment, but as a consequence of the differences and incompatibility of the results of observations and discussion of these effects among experts and key figures based on moral obligations at the level of decision-making. The second direction (environmental risk assessment) was developed in the connection with the extension of a set of objects by

incorporating risk into consideration the state of the species diversity of flora and fauna (ecosystems).

Exhaustive in its completeness example risk assessment of marine activities in the Belgian part of the North Sea (BCHSM) (including risks and negative impacts on the environment) can serve as project RAMA [7]. Risk analysis , in particular, involved a detailed list and description of nature waters characteristic of movement routes , geographical distribution of vessels turnover for quantitative analysis of the different types of cargo, accident analysis in the waters , a risk assessment model of maritime accidents (Marine Accident Risk Calculation System, Marcs) , description of the results of the model Marcs, the description of the spatial distribution of biological communities BCHSM analysis of their importance and protected status , determination of levels of sensitivity (vulnerability) of the environmental and the socio-economic parameters, lists of the environmental and the socio-economic parameters of the coastal and marine waters, mapping vulnerabilities coastal and marine areas within the overall scenario and seasonal scenarios, modeling the effects of oil spills, to develop recommendations for the decision-makers and suggestions for the development of the risk assessment of maritime activities.

RAMA project was carried out within two years of the two Belgian partners: consultancy Ecolas NV (Environmental Consultancy Agency) and the Marine Institute of the University of Ghent (Maritime Institute, University of Ghent).

Given that risk assessment techniques in the environmental (environmental risk assessment) still need to be improved, they are not fully applied in the assessment of the environmental impacts (environmental impact assessment, EIA) (at least in Australia [8]). Nevertheless, it is believed that the ERA can be a good tool for the implementation of the paradigm of "green economy" [9].

Currently paradigm "risk thinking" becomes an accepted norm. For example, in the U.S. National Strategy for the Arctic [10] noted that U.S. efforts in the protection of the Arctic environment and conservation of the natural resources of the Arctic should be based on the risk assessments (risk-based) ecosystems, taking into account the possible impact of climate change and other stressors. In Russia, a similar approach has been previously recorded in the Ecological Doctrine [11].

#### The theory riscs

Developing in the field of engineering sciences and in decision-making with practical application in the insurance and military affairs, financial operations, solving problems of food security and the preservation of health in hazardous production, risk theory has found application in envi-

ronmental science and the practical arrangements for the Conservation of Nature (in terms of the formation of policies and legislation). Starting this process put the Agency's U.S. Environmental Protection Agency (US Environmental Protection Agency, EPA). As a result, there was a set trend in the theory of the risk, based on different principles and methodologies. Formed the basic concepts of the natural hazards assessment (ERA), human health risk assessment (Human Health Risk Assessment) and the environmental risk assessment (Ecological Risk Assessment).

At time of writing [1, 12], according to the authors, there was no unified theory of risk and consistent terminology, including the definition of risk. In particular, it explains the ambiguity of the notion of risk in everyday life (and linguistic) terms. It should be noted that noted in [1] position with a unified theory of risk persists nowadays.

Most definitions of the risk include three common elements: [1]

- a) The possibility of the adverse consequences (injury, damage, loss).
- b) The likelihood that adverse effects will happen (as a measure of the uncertainty of the fact of an event, the timing and magnitude of impacts).
- c) Functional relationship between the probability of the event and the magnitude of adverse effects.

The modern trend bias methodological basis of the orientation of the danger to a focus on risk has the effect of desire for clear separation of concepts danger of adverse effects, on the one hand, and risk, as such, on the other. At the same time more attention is paid to the system of relationships between these components.

With reference to the problems associated with the environment, the modern definition of risk require the presence of such localized components, the danger, the impact (including the impact of the object and the method of exposure), adverse effect, conjugation above components, and finally uncertainty. The details of these concepts are described [1].

The same authors formulate environmental risk as a measure that combines the probability (frequency) of a hazard and the magnitude of adverse effects (harm) to human health or the natural elements or artificial environment. The risk increases if increases the likelihood or magnitude of the harm or both together. Adverse effects include damage, illness, damage to natural resources, species reduction, property damage, economic losses, etc.

In [13] provides a detailed overview of existing approaches to the concept of risk assessment and application. In particular, to the areas where risks are used, the author considers the financial sector and the engineering, management, social services (including medicine) and, in particular detail, and military affairs. In each field, different approaches to the numerical expression

of risk: currency units, size of territory, the degree possible disease / death and destruction facilities, the level of public / political support, etc. The main procedures related to risk analysis includes risk assessment, risk management, the interaction of risk and decision making. "Technological" risk analysis procedures are well developed and include techniques such as flow-profit analysis (cost-benefit analysis), analysis of the tree (graph) failure (fault tree analysis), the establishment of the strategic objectives (strategic objectives at risk (SOAR)) and other key issues, risk assessment author calls complexity (complexity), uncertainty (uncertainty) and ambiguity (ambiguity).

An example of the complexity of the problem of risk assessment may serve as a fire risk assessment. In the assessment of the risks of fires authors of [14] include two types of risk: the risk of fire and the risk of negative consequences of fire to ecosystems. Fire risk is estimated as the risk of fire and the spatial distribution of fire, taking into account the intensity and duration of the fire, and ecosystem risk assessment includes the effects of fire for flora and fauna, as well as the impact on the soil, which may have a longer duration of time. The toolkit is designed to assess the risk in the assumption that the vegetation and climatic parameters are relatively stable, and taking into account possible changes in time. The risk assessment is performed using the predictive models of three types: biophysical model predicting the risk of fire depending on the type of vegetation, the statistical models and life cycle of fire. From the viewpoint of ensuring Hydro should be noted that the first type of model uses the climatic information, and the third type uses a spatial distribution and topography of the wind.

In probabilistic models of fire risk, risk means (1) the probability of occurrence of fire, (2) the conditional probability of a severe fire on the condition that the fire occurred, and (3) the unconditional probability of a large fire.

To scale systemic risk (systemic risks), due to events that have uncontrolled large-scale consequences, in addition to the risks of natural disasters (earthquakes, tsunamis, hurricanes, volcanic eruptions, etc.) or the risks of industrial accidents engineering systems (disconnection of electrical networks, nuclear accidents, etc.) by [15] also considers the risks and major social problems. These include the problems of hunger, lack of resources, war, the problem of possible conflicts due to climate change, pandemics, financial crises, etc. To analyze the risks involved in such research methods chaotic structures, self-organization of complex systems, the methods of nonequilibrium thermodynamics, bifurcation theory, etc. (see for example [16]).

Modern view of the sources of the risk in the Arctic is presented [17]. Among the risk factors, we include a group of the natural factors (geographical isolation, storms, icebergs, the effect

of low temperatures on the mechanisms, polar night, environmental vulnerability, risk of pollution, high responsibility for the impact on the environment, the risk of the emissions from drilling problems offshore operations expertise), group of the economic factors (lack of the development of maritime infrastructure, high levels of investment, the complexity of logistics, potential delays to ships / units, the need for the unique technologies, non-diversified equipment suppliers) and a group of socio-political factors (political aspects, reputation, regulation, tax policy variability, "resource" nationalism, terrorist threats, interactions with indigenous people).

#### The concept of the risc: a dual approach

Virtually all authors of publications devoted to the problem of risk, note the absence of a rigorous and generally accepted definition of the risk. The spectrum is very broad set of definitions from general methodological formulations to rigorous mathematical concepts. An example of the qualitative determination of risk can serve as a form of the words in the textbook [18] devoted to the theory of the economic risks in the management of the organizations, where the category of "risk" is defined as "a danger of the potentially possible, probable loss of resources or revenue shortfall compared with one that is rated for rational use of resources in the form of entrepreneurial activity. In other words, the risk - is the threat that the entrepreneur will suffer losses in the form of additional costs or receive income lower than those for which he had hoped".

Another example can be found in [19]: "... the canonical definition of the risk modern science does not give. About two dozen known definitions are reduced to partially uncertain possibility of the future losses, the value of which depends largely on some of our current actions. We define risk as a property of the scenarios, which consciously or unconsciously active system is estimated at ranging options for the future in terms of their preference for you".

In the tutorial [20] under the risk is taken to mean "the probability (threat) loss of the person or organization of their resources, revenue, or the appearance of additional costs resulting from the implementation of certain operating and financial policies". Textbook author introduces two important types of the risk: "Risk is divided into dynamic and static. Dynamic risk associated with unforeseen changes in the cost of capital due to management decisions, as well as market or political circumstances. Such changes may result in losses as well as additional income. Static risk due to the possibility of loss of the physical assets due to damage to property and loss of income due to disability organizations". In other words, the dynamic risk due to initiative activity, while static risk is determined by the external circumstances.

Analysis of the literature allows two main approaches to the concept of the risk:

- a) Risk is the expected damage (usually in monetary terms) with the measure of the uncertainty of its achievements.
- b) Risk is a dimensionless measure of the uncertainty of the adverse events with a given damage / level of damage.

Apparently, the first approach is due to the use of the notion of risk in finance [21, 22, 23] and especially the insurance business, in which the theory of risk is most developed, which led to the isolation of mathematical methods of risk assessment in the special branch of mathematics - the so-called actuarial mathematics (see, eg, [24, 25]). The second approach is likely, with the expansion of the application of the notion of the risk in the direction of the decision-making processes to ensure the safety of the operations.

The fundamental difference between the approaches can be partly explained by the fact that, as the authors of [26], in English, the word "risk" has two meanings: there is an adverse event and the probability (possibility) of this event. The relationship of these approaches is obvious: with the totality of the uncertainties of the adverse events with the specified damage to an exhaustive set of different damages can estimate the expected average (maximum, minimum, most likely, etc.) damage and get an idea of the probability distribution of damage. Thus, under the damage can be understood and the broader concept of the harm in their respective units.

The author gives examples of 17 different definitions proposed in the period from 1901 to 2009., 14 of them formulate risk as the probability (likelihood) of an undesirable effect (general or specified) and two definitions contain the term "combination" probability of an event and its magnitude, one definition is given as the average damage and, finally, the definition of ISO 2009, which is at risk understands the impact of uncertainty on objectives. In the same paper published a table of mathematical expressions to risk used by specialists from various disciplines (engineering, ecology, toxicology, fisheries, biosecurity and decision theory). In most cases, the expression for the risk are of a general nature, does not allow to perform calculations, and explicitly in any number of arguments in the expression does not include the meteorological parameters.

Demonstration (in the sense of looseness) definition of the risk is given in [29]: the risk - this is a conceptual term used to realize the objects of forces or circumstances that may pose a threat (danger) to persons or property. Description of the risk, as normally done in the terms of the plausibility of harm or damage from hazards and usually involves the identification of possible harm or damage (risk objects can be, for example, human health or the biosystem, property, quality of life, economic activity), a hazard that can cause to harm or damage, and perceptions of the likelihood of this event.

Another example of "vague" definition of the risk is the work [30]. At risk is defined here as characteristic of the system, which are known to the likelihood that certain states or outcomes occurred or may occur. Risk – is a combination of the probability of the event and the corresponding consequences. Decisions made based on the risk related to decisions under uncertainty.

At the same time, the basic document of the World Health Organization is uniquely at risk is the probability of adverse effects on the body, (eco) system, the population (or part of the population), produced by an external action in certain circumstances [31]. When this effect is considered to be a change of state or object dynamics effects.

Vagueness in the definition of risk traced to the last time. For example, the guidelines prepared by the University of Cranfield (Cranfield University) [32], at risk refer to the potential consequences of hazards in conjunction with their probabilities (likelihood). It is noteworthy that in many publications either did not give a definition of risk, or the definition is of a qualitative nature (including, for example, the word "combination", " integration", etc. [33]), with a very detailed description of the risk assessment procedure as multielement process.

To date, the methodology of the risk analysis and management in procedural terms is sufficiently well developed. Common approaches are detailed in the international standards [34, 35], and the versatility of the presentation allows the use of the methodology developed in almost all areas of activity. Such versatility is due to the homogeneity analysis and prediction problems arising in the risk analysis.

According to the approach of the International Standards Organization (the International Organization for Standardization, ISO), the risk - is "the effect of uncertainty on objectives" [36, 37]. Detailed description of the new standard adopted instead of the standard [38], can be found in [39]. In the same paper stresses that the new definition of the risk improves the former restricting the concept of the risk "combination" of the influence and uncertainty.

In [40] a comparative analysis of the international standard ISO 31000:2009 standard and the Committee of Sponsoring Organizations of the Treadway Commission (The Committee of Sponsoring Organizations of the Treadway Commission, COSO, USA). In the latter, risk means the possibility of an event that may have a negative impact on the achievement of objectives. Characteristically, the COSO definition explicitly formulates risk as a measure of uncertainty, however, limits the scope of the consequences only goals. Identifying risks to ISO 31000:2009 as " the effect of the uncertainty on objectives" prioritizes Impact Assessment under uncertainty.

A detailed analysis of the various approaches to the problem of the risk management as an example of the standard [41], risk management research at the Institute (UK, Institute of Risk

Management), "Orange Book" of the Ministry of Economy and Finance UK (HM Treasury) and the International Association "Institute of Internal Auditors" (Institute of Internal Auditors) is given in [42]. In general, it can be noted that the duality in the definition of epy risk persists.

#### **Determined research**

Although attributiveness uncertainty in estimates of the risk is well recognized, the deterministic approach remains relevant. The article [43] describes a deterministic approach to the concept of the ecological risk ( risk ratio (riskquotient, RQ) as the one introduced for evaluating the concentration of the substance (Predicted Environmental Concentration, PEC) to the evaluation of a safe concentration (Predicted No-Effect Concentration, PNEC). PEC size is determined based on the impact and the magnitude PNEC estimated by analyzing the effect produced. Case when RQ is greater than one means that bringing the substance can lead to harmful consequences.

A similar approach was applied to the multiplicative pollution sources when adapted to the seasonal characteristics and types of the natural disasters were proposed in [44]. In Soviet literature the same approach given in the textbook [45].

The authors of a major European project to develop ARAMIS scenario approach to (technological) risks (the cast includes 14 scientific organizations from seven countries: Denmark, Spain, Italy, Poland, Slovenia and the Czech Republic) use the concept of a risk index, which is defined as a measure (quantitative or qualitative), a combination of factors that pose a threat to (technical) system [46]. An important characteristic of the risk, according to the authors [46], is a severity index risk (the risk severity index), which is defined as the sum of the probability of hazards (dangerous phenomen) and specific for each factor indices seriousness of the risk. Summation is over the number of hazards. Here it is assumed that in the case of the critical events (critical event) may occur several hazards, with varying degrees of negative effects (specific indices seriousness of the risk). Specific indexes are measured on a scale from 0 to 100 for four levels of effect (slight, reversible, irreversible and catastrophic).

The overall index is calculated by summing the severity of risk by number of critical events products of probabilities (frequencies) of critical events on the seriousness of the risk associated indexes and normalized in the range from 0 to 1000. Next introduce four levels of the overall index seriousness of the risk: the values within the more than 750 risk of extremely high, from 750 to 300 - high risk, from 300 to 50 - the average risk for the other values - low. Calculating risk severity index as a function of the distance between the source of danger and risk evaluation point, you can build a map of zoning (in the general case in three-dimensional space, and even taking into

account the time) on the degree of risk of danger that is the methodological basis for zoning. For more details see [47].

#### Risc as a combination of damage and probability

As already noted, the concept of risk as expected damage (often in conjunction with the probability of damage) is very common. In most studies published up to mid- first decade of the XXI century. , At risk is defined as "a combination of (a combination of) the probability of an event and its consequences" [48, 49]. The authors of [5], risk means a set of the scenarios, each of which is characterized by its probability of implementation and its consequences. The review [50] devoted to the analysis of the publications period 1976-1981. Concerning the problem of the risk assessment in the nuclear power industry, the following definitions of the risk:

- a) The risk of the expected effects.
- b) As the probability of the risk coupled with the effects.
- c) Risk as the probability of disaster.
- d) Risk as a general concept that reflects the consequences of the measure or harm.

Examples of this approach are the work of [51, 52], etc. The same approach to the definition of risk (including environmental risk) is given in the textbook [53]. Authors benefit under the negative consequences understands damage, expressed in monetary units. In [54] we noted that the usual interpretation of the notion of the risk as a combination of hazard and vulnerability is not a mathematical operation, but is intended to fixation probability of an adverse event due to the expected outcome. Noting that the most important role in the risk assessment is the notion of uncertainty, the authors analyze the approaches based on probability theory, fuzzy logic, and combinations thereof, giving preference to the hybrid approach. In a tutorial [55] (see also the second edition [25]) in the informal interpretation of the risk is "a set of values possible damage to some stochastic situation and its probability".

In [56, 57] technogenic risk is considered as the expectation of consequences (damage) from the accomplishments of the initiating events, the probability of the event and the value of the damage taken as random variables (independent or dependent).

Fundamental work [58], three editions, contain the details of the risk analysis process with examples of risk assessments, feasibility of the projects, a variety of the financial risks, risks in the insurance business, as well as risks of the violation of the microbiological safety of food and animal imports. Basic concept of risk – is the expected damage. Furthermore, the author introduces the concept of "rigidity" (severity) of risk as the sum of the probabilities ranked adverse events and ranked variables damage. It should be noted that to date have been developed and successfully

implemented software for analyzing risks. In particular, the software company ModelRisk (http://www.vosesoftware.com/) based on the results.

The authors of [59] the actual risk is considered the product of probability of an adverse event (accident) the degree of adverse, meaning by the latter product hazard index object vulnerability risk, calculated in terms of the conventional integer (0 to 10). The objects of risk are protected natural areas (national parks, basic farmland, wetlands, areas with a given population density, raw land, etc.).

Following [46], the authors of [59] introduced the concept of natural risk zones (environmental risk field, ERF) for spatially distributed groups of territories subject to risks of various origins as an integrated result of cumulative impacts. ERF allocation suggests that, although some parts may contain a variety of the natural ingredients, "risky conditions" are the same for all parts. For each of the ERF can be determined intensity of the risk (risk intensity) as a spatial effect of the source of risk regardless of the risk objects. Risk intensity is calculated by summing the products of the probabilities of various pollution emissions intensities and private risk (for this type of pollution.) The summation is over the number of cases of pollution emissions. Private risk intensity is determined by the authors [59] as the ratio of the concentration of a pollutant after the release and distribution of the maximum permitted concentration and is also called the hazard index (environmental hazard index).

These structures are the basis of zoning of space on the degree of risk. The degree of risk posed by a sudden release of the pollutants is influenced by two factors: the intensity of the ERF (as a potential exposure to hazards) and the vulnerability of the environment (the vulnerable targets, the higher the risk of adverse effects). When zoning are three zones: the acceptable risk (high resistance to impacts), high-risk area (excess risk situations requiring proof of industrial development and protection measures) and an area in need of reducing the risk (the risks are high and intervention is required to reduce the risks or by reducing the sources of danger, either by controlling the ratio of the hazards and risk objects).

### The problem of uncertainty

Understanding the leading role of uncertainty analysis and risk assessment, including environmental risk, contributed to the development of the statistical approach, the basic methods which are probabilistic (frequency) analysis and Bayesian approach [60]. In [61] provides an overview of the development of probabilistic analysis in risk assessment. According to [62], the concept of risk refers to the effect of uncertainty on the achievement of objectives. Risk describes the probability of an event and its "contribution" on a par with the ability to impact on the achieve-

ment of the objectives of a certain structure (organization). As you can see, this definition is consistent with the definition of an international standard [41]. Principally unavoidable uncertainties in the process of the risk assessment excludes the possibility of making the perfect solution, but leaves the chance to select the "best" solution [63].

A Bayesian approach to risk assessment is a means of better understanding of the impact of uncertainty on the risk assessment, to study the mutual uncertainties of different nature, and is also used to justify the inclusion in the calculation of the amount of risk of subjective measures of confidence and expertise and verification risk assessment models [64, 65]. Proposals for the application interval estimation (in a probabilistic interpretation) can be found [66].

### Risc as the probability of the expected damage (harm)

Non formalised terms "combination", "combination" (see [67]), "taking into account" [68] reflect the complexity of the risk assessment, a decision which in specific cases suggests that a comprehensive analysis of the sources of danger to an activity from both the external environment, and inducible activity itself, followed by qualitative analysis.

Thus, according to the federal law "On technical regulation" [68], "risk - the probability of harm to the life or health of people, property, natural or legal persons, state or municipal property, the environment, health or life of animals and plants according to the severity of that harm ."

In the book [69], the following discussion of the concepts of the risk and vulnerability of therisk: "It seems that the category of the "risk" is derived not only from the concept of "danger" (which has been emphasized by many researchers), but the concept of "vulnerability". It characterizes the loss of the object (subject) stability (security) to the exertion of the adverse effects "and defines the probability of danger as a formula of total probability (though «in the implementation of some set of events ", while the combination of these events has not been disclosed), but under risk, after all, meant the traditional notion of average damage".

But already in the law "On Environmental Protection" [70] for the definition of the environmental risk given no vague terms: "Environmental risk – is the probability of an event that has adverse effects on the environment and the negative impact caused by the economic and other activities, emergencies and natural manmade".

One rigorous approach to the "combination" of damages and uncertainties can serve a quote from [55]: "...theoretical probabilistic analogue of damage, obviously, is the notion of a random variable. Same set of values of a random variable and their probabilities in the theory of probability given by the distribution of the random variable. Thus, under the risk would like to understand the random variable. However, if the risks are identified with random variables defined

on different probability spaces, the problem of comparing such risks is fundamentally unsolvable and even meaningless, since the corresponding random variables as a function of elementary outcomes depend on the arguments that have different meanings. Therefore, in such situations have to identify the risks of distribution functions". In the work cited object of study is the outcome of the random variable insurance fund or a cash balance of the insurance company to some fixed set of insurance contracts.

Mathematical modeling study of the financial risks as a functional on the set of the distributions with certain properties developed in [70]. In this paper, the measurement of the risk is understood as a quantitative description of the preferences on the set of probability distributions.

Concise , but an exhaustive definition of the risk given in the lectures [71], where the risk is any distribution from the set of probability distributions on a measurable set of results ( ie, the set of results with the corresponding  $\sigma$ - algebra) . In a rigorous formulation of the problem in [55, 25] at risk (more precisely, under individual risk) refers to the distribution of a random variable ( in the dynamic case - random process) of the outcome of the insurance fund or a cash balance of the insurance company on some fixed insurance portfolio.

Because not all damage can be given in value (and sometimes even in numerical) terms (especially environmental safety, health and social problems), with an a priori analysis of the possible negative consequences of the emphasis is on the assessment of the uncertainty of the hazardous events. For example, in [72], risk means uncertainty in the occurrence of the consequences that may affect decision-making. Some of these effects may include opportunities (loss) income, damage to health or other effects affecting the welfare, ie uncertainty that "matters".

According to [73] the risk criteria are expressed by the probabilistic nature and are determined by the probability (or frequency) of the threats to human society and the state and the amount of damage caused by this realization. In some cases, under the criteria of risk only understand the likelihood or frequency of adverse, hazardous or catastrophic events.

A glossary (which is typical for this type of the documents) with a breakdown of all the special terms. In particular, the concept of the risk is understood in four ways: 1) the risk includes consideration of the possibility of an adverse outcome, the frequency with which one or more adverse events occur, including the seriousness of the consequences, 2) at risk refers to the ability of the unwanted, negative consequences to human life, health, property or the environment, and 3) the likelihood of adverse effects as a result of exposure to one or more environmental factors, and 4) the answers to the questions: what can go wrong, as far as reasonably and what are the consequences.

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Reviewer — Shraga Moisey Haimovich, Doctor of Medical Sciences, Professor Dear collegues,

We regret to announce that October 13, 2013 on the 62-year of life suddenly passed away, our colleague, our friend, the talented journalist and scientist, Doctor of Political Sciences, Department of Public Administration of the Northern (Arctic) Federal University named after M. V. Lomonosov, executive Secretary of the editorial board, a member of the editorial board of the electronic scientific journal "Arctic and North", member of the Geographical Society of Russian Academy of Sciences, member of the Russian Union of the Journalists.





Respected by all his colleagues, Alexei Ivanovich was the initiator of the electronic scientific journal "Arctic and North" in 2010. At its most active and the direct participation of the prepared constituent documents, statutes and developed the concept of the journal, published the first issue in February 2011. Under his wise mentorship were published, all four issues of the journal in 2011, when we actually did not have any established post in the journal and creatively worked all year on enthusiasm. Alexei Ivanovich always generously shared with us his extensive professional experience as a journalist, editor of the newspaper "The fisherman of the North", a public figure. He initiated many projects, including those of the photo contest "My North. My Arctic", was personally involved in it and was awarded with the Certificate of Merit.

We grieve together with his family, friends and colleagues. Memory of Alexei Ivanovich remains in our hearts.

The shef editor of the journal "Arctic and North" Y. F. Lukin

# Summary

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#### Аннотации, ключевые слова

### Регионология Арктики и Севера: управление, экономика, социум, культура

© Кирко В. И., Копцева Н. П., Невзоров В. Н., Ноздренко Е. А., Слабуха А. В. Междисциплинарные экспедиции — эффективный способ формирования команд для реализации комплексных инновационных и инвестиционных проектов

**Аннотация.** В статье представлены итоговые результаты междисциплинарных экспедиций студентов, аспирантов и преподавателей четырех университетов г. Красноярска в поселки локального проживания малочисленных народов Севера Красноярского края

**Ключевые слова**: коренные малочисленные народы, междисциплинарные экспедиции, студенты, аспиранты, преподаватели

#### © Лукин Ю. Ф. Арктические проекты межрегиональной интеграции

**Аннотация.** Исследуются проблемы межрегиональной интеграции в Российской Арктике на примере Совета Белого моря и проектируемого Арктического союза регионов России **Ключевые слова:** Российская Арктика, Белое море, интеграция, регионы, проекты, Арктический союз

# © Морозов Н. А., Кондраль Д. П. Сравнительный анализ российской и американской стратегий развития Арктики

**Аннотация**. В статье проведено сравнение российской и американской стратегий освоения Арктической зоны и проанализированы ментальные паттерны западного и восточного восприятия пространственного развития

Ключевые слова: стратегическое планирование, развитие, Арктика, концепции политики

# © Москаленко М.Р., Кропанева Е. М. Особенности человеческого капитала и развитие Российской Арктики

**Аннотация.** Проводится сравнительный анализ уровня дохода и продолжительности жизни субъектов АЗРФ и других стран Арктики. Выявляются основные проблемы здоровья населения как одного из ключевых аспектов развития человеческого капитала. **Ключевые слова**: *человеческий капитал, здоровье населения* 

# © Нестеренко М. Ю., Иконников В. М. Арктические стратегические проекты и их реализация

**Аннотация.** Презентация модели кооперационных проектов по освоению ресурсов Арктики, разработанная проектной группой из Архангельска

**Ключевые слова:** Арктика, Whitefield, управляющая компания, модель, проекты, кооперация, государственная поддержка, опцион, форвардный контракт, эффективность

# © Носкова Е. М. Системные особенности устойчивого развития регионов циркумполярной зоны

**Аннотация.** Представлен системный подход к изучению устойчивого развития Арктического региона, его основные признаки как системы, указаны особенности развития языков **Ключевые слова**: *Арктический регион, признаки системы, финно-угорские языки* 

# © Рахманова Л. Я. Соловецкое местное сообщество: самоорганизация против разобщенности

**Аннотация.** Анализируются исторические формы кооперации и взаимопомощи на Соловецких островах в целях сопоставления с современной ситуацией в поселке Соловецкий. Предлагаются пути преодоления дезинтеграции местного сообщества за счет изменения структуры занятости населения и разработки новых жизненных стратегий

Ключевые слова: Соловецкие острова, местное сообщество, самоуправление

#### © Храмчихин А. А. Основные проблемы Российской Арктики

**Аннотация.** Коррупция, бюрократия, отсутствие стратегии развития являются общероссийскими проблемами. Главные проблемы собственно Арктики — климат и неразвитость транспортной инфраструктуры. Без развития транспорта говорить о перспективах развития Арктики бессмысленно. Кроме того, необходимо размещение вдоль арктического побережья арктических бригад и сил ПВО ВС РФ

**Ключевые слова**: Арктика, коррупция, стратегия, население, транспорт, арктические бригады

# © *Цукерман В.А., Горячевская Е.С.* О методиках интегральной оценки инновационного потенциала регионов Севера и Арктики

**Аннотация.** Проведен расчет интегральных показателей инновационного потенциала регионов Севера и Арктики по трем методикам. Уточнены их преимущества и недостатки. Определено, что наличие большого количества различных подходов и показателей оценки уровня инновационного потенциала территорий связано с неоднозначностью трактовки в России понятий, несовершенством системы статистических показателей и отсутствием необходимой информации. Показана необходимость дальнейшего совершенствования методологии интегральной оценки инновационной деятельности стран и регионов

**Ключевые слова**: инновационный потенциал, регион, Север, Арктика, интегральная оценка

# © Шрага М. Х., Кудря Л. И. Гуманизация «региональой науки» («regional science»): социальное здоровье на Европейском Севере

**Аннотация.** Статья является проекцией социально-экологической методологии на изучение социального здоровья городских сообществ на Русском Севере. Регионология Севера понимается авторами как наука изучения городских сообществ Арктики. Ноосферогенез является тем научным подходом, который может положительно решить вопросы освоения Севера **Ключевые слова**: городские сообщества (хабитаты), гуманистическая концепция, регионология, социальная экология, социальное здоровье, экосоциализм

### Исторические науки

# © Амброче Т. В., Чуракова О. В. «Злохитрева жена» «окаянная Марфа»: мифы и исторические источники о роли Марфы Борецкой в политической борьбе Москвы и Новгорода и основании северных монастырей

**Аннотация.** Обращение к источникам (летописным сводам, устным преданиям) позволяет не только установить степень достоверности исторических текстов, но и актуализировать события прошлого. Имя Марфы Борецкой хорошо известно историкам и краеведам, но роль женщины-легенды в основании северных монастырей сильно преувеличена

**Ключевые слова:** Север, политическая борьба, монастырская колонизация, гендерные роли, личность в истории, альтернативы исторического развития

# © Зарецкая О.В. Трансформация внешнеполитической стратегии Норвегии в условиях формирования биполярной системы мира (в первые послевоенные годы)

**Аннотация.** Изменения внешнеполитического курса Норвегии после Второй мировой войны были продиктованы комплексом проблем, с которыми страна сталкивается в 1940-х гг. Формирование биполярной системы мира заставляет норвежское правительство по-другому взглянуть на свою внешнеполитическую стратегию

**Ключевые слова:** история внешней политики, скандинавские страны, Арктика, международные конфликты, нейтралитет

#### © Зобнин А. Н. Тайна пролива Неймайера

**Аннотация.** В статье сделан анализ всех имеющихся на сегодняшний день сведений о последних днях Г. Я. Седова, его кончины и захоронения. На основе этих материалов указаны направления для дальнейших поисков могилы начальника первой русской полюсной экспедиции

**Ключевые слова:** экспедиция, Седов, святой Фока, матросы, Линник, Пустошный, ЗФИ, Рудольфа, нарты, лед, арктический, Новая Земля, пролив, мыс, Аук, маршрут, путь, стоянка, остров, геология, гидрология

# © Константинов А.С. Трансформация территориально-поселенческой структуры как фактор изменения численности сельского населения в Архангельской области

**Аннотация.** В статье представлен анализ результатов изучения вопроса о трансформации территориально-поселенческой структуры в Архангельской области как факторе изменения численности сельского населения в период между переписями населения 1926-2010 гг.

**Ключевые слова:** трансформация территориально-поселенческой структуры в регионе, типы сельских населенных пунктов, динамика изменения численности сельского населения, переписи населения

# © Тимошенко А. И. Советский опыт мобилизационных решений в освоении Арктики и Северного морского пути в 1930—1950-е гг.

**Аннотация.** Рассматриваются проблемы мобилизационных решений в хозяйственном и военно-стратегическом освоении Арктики и Северного морского пути в 1930—1950-е гг., анализируется советский опыт реализации важных для государства социально-экономических программ в северных районах, богатых природными ресурсами

**Ключевые слова**: Арктика, Северный морской путь, мобилизационные решения, государственное управление, целевые методы

#### Экология

### © Дмитриев В. Г. К вопросу о понятии экологического риска. Аналитический обзор публикаций

Аннотация. В статье приводится обзор некоторых публикаций, посвященных понятию и теории риска в контексте определения экологического риска за период с конца XX в. по 2013 г. Особое внимание уделено роли и месту теории риска, развитию «рискового» мышления в рамках парадигмы «зеленой экономики», динамике изменений понятия риска и различным подходам к определению риска в страховом и военном деле, финансовых операциях, в решении задач обеспечения продовольственной безопасности и сохранения здоровья на опасных видах производства, в науках об окружающей среде и практических мероприятиях по охране природы

**Ключевые слова:** Арктика, обзор, риск, экологический риск, вероятностный анализ риска, охрана окружающей среды, экология

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## Abstracts, keywords

### Regionology of the Arctic and North: Management, Economy, Sozium, Culture

© Kirko V. I., Kopzeva N. P., Nevzorov V. N., Nozdrenko E. A., Slabyha A. V. Interdisciplinary expeditions - an effective way to form implementation complex innovative and investment projects

**Abstract.** In the given article we represent our final results of the inter-disciplinary expeditions of the students, post-graduate students and tutors of the 4 universities of Krasnoyarsk to the villages and localities, inhabited by the indigenous minorities of the North of the Krasnoyarsk Region **Keywords:** *indigenous minorities, interdisciplinary expeditions, students, post-graduate students and tutors* 

#### © Lukin Y. F. The Arctic projects of the interregional integration

**Abstract.** The problems of the interregional integration in the Russian Arctic, as the example of the White Sea and the planned Arctic union of the regions of Russia

**Keywords:** Russian Arctic, the White Sea, integration, the regions, the projects, Arctic Council

# © Morozov N. A., Kondral D. P. Comparative analysis of the Russian and American strategies of the development of the Arctic

**Abstract.** The article is a comparison of Russian and American strategies of the development of the Arctic zone and analyzed the mental patterns of the Western and the Eastern perception of the spacel development

**Keywords:** strategic planning, development, the Arctic, the concept of the policy

# © Moskalenko M. R., Kropaneva E. M. The features of the human capital and the development of the Russian Arctic

**Abstract.** Presents a comparative analysis of the level of income and life expectancy the areas of the Arctic region of Russia and other Arctic countries. Health problems are identified as one of the key aspects of the development of human capital

Keywords: human capital, public health

# © Nesterenko M. Y., Ikonnikov V. M. The Arctic strategic projects and their implementation

**Abstract.** Presentation of the model of the cooperative projects to develop resources in the Arctic, developed by the project team from Arkhangelsk

**Key words:** Arctic, Whitefield, the management company, the model, projects, cooperation, specific measures of state support, options, forward contracts, efficiency

# © Noskova E. M. The system of the sustainable development of the regions of the circumpolar area

**Abstract.** The article presents a system approach in the research of the sustainable development in the Arctic region and its basic evidence as a system, the attention is paid to features of the development of the languages

**Key words:** the Arctic region, evidence of the system, the Finno-Ugric languages

# © Rahmanova L. Y. The local community of the Solovetsky Islands: self-organization against dissociation

**Abstract.** This article analyzes the historical forms of the cooperation and mutual aid typical for Solovky Islands with a view to compare them with the modern situation in Solovetsky settlement. The ways of overcoming of the local community disintegration via restructuring of occupational pattern and elaboration of the new life strategies are proposed

**Keywords:** Solovky islands, local community, self-government

### © Hramchihin A. A. The main problems of the Russian Arctic

**Abstract.** Corruption, bureaucracy, lack of strategy development are all-Russian problems. The main problems of the Arctic itself are the climate and poor transportation infrastructure. Talks about the perspectives of the development of the Arctic are meaningless without the development of the transport. Quartering along the Arctic coast of the Arctic brigades and air defense forces of the Russian Federation Armed Forces is also need

**Keywords:** the Arctic, corruption strategy, population, transportation, the Arctic Brigades

# © Zukerman V. A., Goryachevskaya E.S. About the methodology of the integrated evaluation of the innovative potential areas of the North regions and the Arctic

**Abstract.** The calculation of the integrated indicators of the innovative potential of the regions of the North and the Arctic by three methods. Clarifies the advantages and disadvantages of each method presented. Determined that the presence of a large number of different approaches and indicators to measure the level of innovation potential areas due to the ambiguity in the interpretation of the concepts of Russia, imperfect system of the statistical indicators and the lack of necessary information. The necessity of the further development of the methodology of the integrated assessment of innovation countries and regions.

**Keywords:** innovative potential, the region, the North, the Arctic, the integrated assessment

# © Shraga M. H., Kudrja L. I. Humanization of the regional science»: Social Health of the European North

**Abstract.** Given clause (article) is a projection of the social - ecological methodology to studying of the social health of the city communities in the Russian North. Regional science the North by the author is understood as a science of the studying of the city communities of the Arctic regions. Noospheres are that scientific approach which can positively solve questions of the development of the North.

**Keywords:** city communities, the humanistic concept, regional science, social ecology, social health, eco-socialism

#### **Historical sciences**

# © Ambroch T. V. Churakova O. V. 'Evil – cunning wife' 'Damned Marfa': myth and historical sources about the role of Marfa Boretskaya in the political of Moscow and Novgorod in the outdating of the Northern monasteries

**Abstract.** Examination of the sources (annalistic codes, verbal folklore) not only allows us to determine the reliability of the historical texts, but also helps us to actualize the events of the past. Marfa Boretskaya's name is well-known by the historians and local historians but as sources indicate, the role of that legendary woman in the foundation of the northern monasteries is grossly exaggerated.

**Keywords:** the North, political struggle, monastic colonisation, gender roles, personality in history, alternatives of historical progress

# © Zaretskaya O. V. The transformation of the Norwegian foreign policy strategy in the formation of the bipolar world (after the war)

**Abstract.** After the Second World War changes in the foreign policy of Norway became a consequence of the problems that the country faced in 1940. The growing confrontation between the East and the West led to the formation of the bipolar world and made the Norwegian government change the foreign policy

**Keywords:** history of the foreign policy, Scandinavian countries, the Arctic, international conflicts neutrality

#### © Zobnin A. N. The mystery of the Neumayers strait

**Absyract.** In the article made an analysis of all the currently available information about the last days of G. Y. Sedov, his death and burial. On the basis of these materials are given the direction of the further search for the tomb of the first initial Russian polar expedition

**Keywords:** the expedition, Sedov, Holy Fock, sailors, Linnik, Pustoshny, Franz Josef Land, Rudolph, sleds, ice, Arctic, A New Earth, Strait, Cape, Auk, route, path, one-Janka, island, geology, hydrology

# © Konstantinov A. S. The transformation of the territorial and settlement structure, as the factor of the change of the number of country people in the Arkhangelsk region

**Abstract.** The analysis of the results of studying the question of a role of the transformation of the territorial and settlement structure in the Arkhangelsk region as a factor of the change of number of country people during the period between population censuses of 1926-2010 is presented in the article

**Keywords:** transformation of the territorial and settlement structure in the region, types of rural settlements, dynamics of the change of the number of country people, population census

# © Timoshenko A. I. The Soviet experience of the mobilization decisions in the development of the Arctic and the Northern Sea Route in 1930-1950 years

**Abstract.** The problems of the mobilization decisions in the economic and military-strategic development of the Arctic and the Northern Sea Route in 1930-1950-ies. Analyzes the Soviet experience in the implementing important for the state of the socio-economic programs in the northern areas rich in the natural resources

**Keywords:** the Arctic, the Northern Sea Route, the mobilization solutions, governance, target methods

### **Ecology**

### © Dmitriev V. G. To the concept of the ecological risk. Analytical review of the publications

**Abstract.** The article provides an overview of some of the publications on the theory and the concept of the risk in the context of the definition of the environmental risk for the period from the end of the XX-th century to 2013. Attention is given to the role and place of the theory of risk, the development of "risk" of thinking within the paradigm of the "green economy", the dynamics of changes in the concept of the risk and different approaches to the definition of risk in the insurance business, financial operations, the military, in the task of ensuring food safety and health in hazardous production, environmental science and the practical arrangements for the protection of nature.

**Keywords:** review, risk, ecological risks, probabilistic risk analysis, environment protection, ecology

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