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Geopolitics

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The mission of Russia – is to be an example of building the world power with the optimal social – cultural model of the development of the nations



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Abstract

The article defines the futurological capabilities of Russia to the world's leadership in the social modernization of the society. As hypotheses for the strengthen of the Russian's

geopolitical situation in the long-term historical process is named, as the stimulation process of the unitarization of the government, evolutionary modernization of the national and ethnic portrait of the Russian society and the formation of the associated sozium with the culture of the union historical existence. The author emphasizes that the international leadership of Russia in the social development of mankind is based on the leading social policy of the country, its peoples (ethnic groups) and the Russian society.

Keywords: *futurology, social mission of the Russian Federation, future of the XXI–XXXI century, the assimilation of nations, national elites, diagnosing of the problems, unitarization, the symbiosis of the ethnic cultures of Russia, the Russian society.*

The states form world civilization. They represent a variety of existing models of the public institutions with multi-vector dynamics of the historical process, about the dominant conceptions of their place in the future history of mankind. The concept reflects the psychological perception of life and moral philosophy and worldview of the people of the state. Its core is invisible intuitive sense of the mission of the social and political future of the state in some way determined by the dynamics of life philosophy and practice of each generation of its citizens.

Previous history of mankind has shown that this or that is due to its phase separation of the several states that seek to dominate the fate of other nations. The past two millennia have revealed a pattern of the struggle for primacy in the historical development of mankind. This periodic change of states - the leading actors of the world influence. They were ancient Egypt, the Byzantine Empire, Portugal, Spain, UK, France, Germany, USA, Russia.

The third millennium of the history of human civilization will be objectively demonstrate, by virtue of a permanent change in the law of the evolution of the world leaders, the transition palm of the championship from one state to another. The leading countries of the modern world (at least, outside the G20) – is the most likely participants of this global competition. All this creates and reproduces the global demand for ideas to upgrade basics of human life, nourishing the world powers compete for a place in the leaders of the social progress on the pedestal of the historical success of the internal political and the economic system.

We must not forget that the modern countries differ on the possible impact on the parameters of the state and development of the global space of the human life. XXI Century has visibly demonstrates the potential of the historical leaders of the structure of development of the world. However, allow us to assess the actual role of the assumption of a state (group of countries) in the world community of their potential: economic, military, intellectual. This criterion, in our opinion, differentiates political and psychological conditions of the onset of the global hegemony of the ideology, their chances for project proposals to be a significant factor of the constructing futurological perspectives.

In the context of the theme of this article, it is first of all, the impact of geo cultural contenders for the global leadership on domestic social development of other countries. To the subjects of the socio-cultural impact of geopolitics on the modern world include the USA, China, Russia, India, and Japan. You can include some other countries of the world whose spiritual and cultural potential has closed regional framework, so is the subject of our attention.

The USA from the practical global hegemony dominates in the worlds inter civilizational interaction, leaving far the group of the main contenders for the economic leadership in the world. This country is based on its economic power and military potential, cynically manipulated by the "American model" of a set of universal values. The American national interests associated with the interests of the whole world¹. Protest against the leadership of the USA in the Western civilization of the consumerism will not, provided that the country is only one version of an example for humanity.

The leaders of the world economy, of course, they are India and China. Not rule out that China's economic expansion, which will complement its socio-cultural insight into the life of the people of Europe, Africa and, of course, of the South Asian region. Then do not exclude the traditional spiritual corrosion the potential of the Anglo-Saxon morals or the Western European symbi-

¹ Stivahtis.Y. Power in the contemporary international society: international relations at the intersection of the political and sociological theory // Abstract Journal. Social and Human Sciences. Series 16. Sociology. 2009. Number 4. p. 111-114.

osis. The expansion of Chinese business practices may be a factor of slow release (displacement) of the nucleus of the European culture of the mental consciousness of the Western individual with simultaneous replacement of the spiritual attributes of the fault of Europeans Chinese way of life.

This is the probable ferment of the process of the Chinese assimilation of the consumer sentiment of the African – Southern - European nations. But the hypothesis of a similar culturological modernization of the traditional values of the Western philosophy is adjacent to the recognition of the history of the European paradox, partly African, civilizations. Chinese-Asian sociocultural dissonance is the need of civilized human progress in the optimal spiritual consciousness.

In our opinion, the rest of the world for the next three to four centuries probably will not be ready to assimilate the Asian philosophy of life. Evolutionary industrial demand will force the mankind to seek a compromise ideology of the cultural and historical improvement. Probably, at the junction of the cultures of Islam, Christianity, and new faces of integrable European mentality, which acquired during the historical Mixing Capacity of the spiritual and cultural values of the people (ethnic groups), in the wake of the evolution of the leading companies in Europe will be a dilemma for himself cultural and philosophical potential of China (including its religion). European nations are unlikely to deem it acceptable borrowing institution as a factor in its historical spiritual development, though its half billion people - the inevitable pressures on the world's social and demographic history.

In my opinion, in Russia appear the geopolitical socio -cultural chance to offer the world a historical futurological alternative to the global spiritual and cultural leadership in the future. What is the essence of this chance? In the opportunities and in the availability of the balance of time, not only for the critical revaluation causes social illnesses and the economic development of the XX century and at the beginning of the XXI century, but also to model of the ideological basis for the social revenge, lifting all layers of the population of Russia to upgrade the structural model of the social state.

This is facilitated by the specific cyclical economic developments around the world. The States that now and later will come to the first criteria of the super industrial and mass prosperity, earlier than Russia run into the limits of the growth. They will be forced to stop before a wall of the economic power and the consumption of saturated for charting the direction of the development. Do we have everything, which we need? In my opinion, the brief historical material phase of the saturation is inevitable revolutionary replacement of the goals of the economic development (the company) on the development of man's inner world.

This is the beginning of the revolutionary cultural turning point in the history of the evolution of the social consciousness of humanity, when the processes of life dropping selfish motives completed the start of the crystallization process of the positive moral values that contributes to the establishment of a new system of the social life. In it, every citizen will be integrated with the surrounding community ideals, no longer the political slogans. This is a sign of a society in Russia of high spiritual culture as the historical background of life in accordance with the moral primary source of being, which is subject to an individual's personal freedom, harmony, happiness for him and good for society.

***National elite, as the factor of the history of Russia:
Pessimism or optimism of the hope in her future***

Realistic formation of the ideology of the social revenge, her subsequent incorporation into the mechanism of the functioning of the state and society - an objective historical need to the strengthen geopolitical role of Russia in geo cultural XXII-XXIII centuries. Then the Russian state will not be 1150 years, marked now, and 2300 years. If during this period will not appear, and secure in space of Russian socio-cultural dominance, in the following century, the Russian world and get into the spirit of the Russian historical degeneration.

About its inevitability is reminding the words that "our country, unlike the Soviet Union, does not create any global patterns, alternative American. We left the higher historical league and fear because we've long had nothing². If an increasing number of elite Russians will be under the banner of such reasoning, then, in the end, Russia and Russian culture will not stand socio - cultural dominance of the other branches of the world civilization and Russia as a nation will sink into oblivion. I can not even imagine that it is similar to the historical fate - the possible fate of my country, so I want to think about a bright destiny of Russian civilization as necessarily subject upliftment of humanity to the heights of humanity, civil society and a harmonious social life. Priori certain that Russia might take in the future history of mankind due place only at the steady movement towards improving the spiritual and cultural life of the socio-economic development. This historical mission with continuous and consistent demonstration of Russia's ability to social-psychological comfort to its citizens. The mission is real when building a social model of society, attractive for planetary Russian world and all people who up to this stage of history to some extent preserved historical and cultural memory of a common past history of interaction.

Accent this moment deliberately. Country - leader is not difficult to become a hegemon in a separate phase of the historical process. There is enough of the phenomenon of Minin and

² Belkovsky S. Restart forever // Neutral. 2012. Number 34. P. 4.

Pozharsky, Borodin, Sputnik and Yuri Gagarin, the flag-raising over the Reichstag reach the bottom at the North Pole or the encouragement of other nation's internal social experiments, such as socialism. On the first phase of the testing historical paradigm of the socialist house really rocked many nations of the earth. But we have long known about the historic defeat of the Soviet Union in 1991 to create a new social order, so the advantages of the socialist absolutization regulators of the social progress, which would not be a scientific evaluation result of the civilizational achievements. And this does not preclude the recognition of the subjective reasons of the building the foundations of communism in 1980.

Firstly, was made the idealized path. But yet the dramatic crown experiment does not exclude the prospect of demand for its social experience descendants. After all, his goals were not utopian, and the identification of the public consciousness of the socialist principles of the economic equality and the social policy of good, important for the citizens of other countries. It is a historic achievement testing practices of the socialism.

Second, this way is objectively impossible to be successful, as many generations of Russians didn't feel the ability of the public institutions of the USSR (Russia) to create conditions for fruitful work. Reproduction CPSU public appeal social system, ideology admiration best workers devalued systemic economic feudalism at work. When the whip over the back of the political compulsion to competition, and in the pocket - small coins, workdays, and the spiritual power of many citizens was pulled anti motivated shackled to the ground, blocking the highest productivity.

This criterion is known by V.I. Lenin, as one of the most important conditions for the victory of communism. It is long gone, but modern Russia has not jumped to a new model of the human factor. Country lag behind in labor productivity of 2-2.5 times of the industrialized nations, as recognized recently forecasting the development of the Russian Federation for 2013-2015.

One of the lines confirm the historically unfavorable attitude of the working man, and at the present stage is lower in comparison with the industrialized countries the share of wages in GDP. In 2002, this percentage was 46.3% in 2007, even lower - 45.6%³. In this process, there is the borderline state of motivation of employees to work productively, because the proportion of 40% is to minimize the desire of citizens to work honestly. In other words, Russia forced them to win on its individual phases of the history of mass sacrifice of the people, rather than the art skills to direct his energy to the creative work have adequately assessed.

Here, in a timely manner to indicate a further judgment of the slow rise of Russia to the world championship: permanent rupture of the national elite with the worldview of the majority.

³ By decent wage // Business and Life. 2008. Number 22. p. 31.

The elite have always wanted to live on the majestic heights of their needs, covering the view of life of the people. This is one of the causes of the present historic opportunities narrowing social and economic revival of Russia, its leadership role. We have no right to retouch epistemological aspects of the content of the historical practice of Russia.

Large range of the socio-economic indicators of the UN member states which position Russia in the world process of a serious system failures in its social health. Over the years 1990-2010 Russia broke into the first place in the world of Mental Disorders of the population and the number of suicides among the elderly, children and adolescents, according to the number of children abandoned by their parents, the death rate from heart disease and heroin. Russia leads in the consumption of alcohol, tobacco, and the number of people who died because of this. Russia is in the second hundred of the level of physical security, political rights and freedoms, in terms of health and life expectancy of men and women. While Russia is not to be an example to other countries on state spending on citizen (72 seats), the standard of living (67 seats), the level of human development (71 seats), the per capita income (97th place).

These indicators of the state of Russian society – are the eloquent symbols of the outcome not only of the process of the civil millennial cultural and psychological socialization but also the effectiveness of the strategic course of the development of Russia last 20-30 years. Empathy for the people of the elite was no empathy to the society, and the way to save it its position. Assisted mass enslavement of consciousness citizens promises a good future in 10, 20 and so the number of years (communism, private apartments, decent pensions, pay equity, and so on).

Ruling elite, periodically changing these promises, operated out of the people, but sooner or later they called faults of the social and individual consciousness of Russians. They could only be painkilled by the extravagant ideas, let the people from the differentiation of grain and chaff similar strategies to manage the development of the country. This is the background of the possible concepts of a special path of the development and movement of Russia to a worthy place in the world, the resuscitation of the postulate of the third Rome, updating the Western judgments about the incomprehensibility of the Russian soul. Reclamation of the elites of any such idea – is a sign that once again need a kind of power, Ivan Susanin, who will lead her world of the historical impasse indignation of citizens will take the strategies of "optimization" of the next process with antisocial bias in mainstream marginal novelty.

Hope on the optimization of the parameters of the future place of Russia in the world dismayed by the indisputable fact that during 110 years, Russia has lost the face of the progressive advanced development. During this time, Japan almost tripled its economic importance, and the

USA is almost maintained their economic dominance in the world. Even Russian's northern neighbors (Norway, Sweden) were able to get ahead, despite the fact that the rest of the world dynamically went forward. In other words, they were able to synthesize all the factors and make a historical success. The share of Russia in the global production of GDP was less than a factor of 2. This kind of revenge of the past social order for economic mistakes and proof that the political elite (communist, market) has failed and is not able to manage such a large ship, like Russia. If the country in the international competitiveness ranking is 67th, then one of the reasons for the slow change rank this position even agree Dmitry Medvedev. It is ineffective functioning of the state apparatus.

This identity of the political system of the state – is an unpleasant logical assumption that Russia is easier to be a pioneer of accumulation and increase of the historical errors, than to be the subject of prevention. National elite can not find an innovative outlook, at times liberating her spiritual interests of hypertrophied passion to the love, as in the past, and now prevents her to pioneer the use of effective tools for development rights, respect for the ordinary citizen of the country without commercial property. About 84% of the population surveyed notice analogs such motivation. The flip side of it is the creation of social psychology and ideology of the cult of lucre and approval regime of public relations, where it is impossible to be honest and it is impossible to store-confident person. The maintenance of this specific mass psychology can cause doubt that XXI century will be the era of Russian geopolitical success.

The essence of the mission of the social leadership of the Russian Federation

We were not impressed by the short-term ups of the international authority of Russia, occasional rises to the Olympic gold, rare football success of fortune, even though they generate fresh ideas and fundamental development of the state and society. The principle is more important and also important the sustainable leadership of Russia to all future millennial way to its sovereign destiny. That is why it is necessary in a timely manner to realize that it is impossible to lead others, when the economic leader of the world's countries perceived heavy pressure, social space with uncomfortable institutional system of the social relations. D. Trenin⁴ thought, the strategy needs real vision of the world situation and its prospects. Its content can and should be the result of the creative work of many scientists and politicians. I also have a right to claim that part of the mission of the global leadership of Russia can and should be a process:

- ✚ Achievement and reproduction of the internal socio-economic development, supporting the creation of a historical trend and continuous updating of the most advanced model of the or-

⁴ Trenin D. Unpractical pragmatism// PRO et Contra. 2008. № 5–6. p. 24–32.

ganization of the economy and public institutions in Russia, appealing to people of many countries in the world;

- ✚ Highly developed society in which citizens of Russia can live to the highest standards of quality of life, mental health and social well-being, feel happy people and one people, proud of their country anywhere in the world.

This strategy may prove to be a magic wand, the project of a new geopolitical future of Russia. She must be in the hands of contemporaries who are obliged to go to different horizons geopolitical foresight and planning of historical creativity of the people. Existing evils of the social development will be more intolerant, and the goals of the leadership development will be more necessary if the future state will design not for 20-30 years, and at least 2-3 centuries. Moreover, geopolitical stability of large states, such as Russia, supported the project view of the millennium ahead. In this case the phenomenon of night blindness is excluded from the subjects of the process of the historical development of Russia: the politicians and the people receiving the knowledge of the vector of its mission.

I studied the theoretical concept of the leadership development strategy of Russia in 2020-3020s through the political doctrine of the consolidation of the political interests of the elite and the main part of the citizens of modern Russia, now separated palliative situation on the struggle for power in the country. This concept – is a long-term core crystallization of a new civil culture of Russian society, generating and reproducing mass psychology of the inviolability of statehood and historical consistency of Russia. The great ideas generate spiritual animated burst of the energy of the social edification of the people, when the status of small gray mouse, unattractive fuss does not suit any person-citizen or a dominant part of the society. Encouraging sign of feeling such a need can be called political and philosophical outline Report of the President of the Russian Federation at the St. Petersburg International Economic Forum 2012.

Such ideas are needed to upgrade the historical mainstream of Russia as the "right frame of mind of people of all ages, social and political groups directly determines the well-being of the Fatherland."⁵ However, provided that the real practice of the work of elite will stimulate the Russian individual to recognize the historical and creating role of each citizen, to promote the public motives of their activities. Russia can lead the world, and if we learn to integrate the interests of all social groups attractive ideas development.

Purpose of Russia as a world leader comes to the ability to show to other countries new orientation of the social organization of the society, of the ability to support Russian's claim to the

⁵ Easter message of Kirill - Patriarch of Moscow and the whole Russia. / 2012 is available at: Spiritual sower (Holy Trinity of Antonievo-Siyskiy Monastery Arkhangelsk eparhy). 2012. № 2-3. p. 2.

authority of the potential global supply rest of the world of ideas and technologies, their application. Then the work of each generation of Russians in this area will be evaluated positively in the international community. Then recognition of Russia's global role in the global governance of the world today, over 100-200 years old and in the third millennium will be credible evidence of geopolitical knowledge and skills of political and corporate elite to manage the state. Then inevitably will shine spotlights successful creation of the Eurasian civilization as one of the leaders in the development of mankind.

The theory of its worlds leadership (the hegemony of the state) has no genetic connection to the theory of a world government, cultivated by individual candidates for the dominant position in the world. Under this option, think - is fundamentally contrary to the nature of the treatment of Russian society and the state. It has never been a parent, let alone a knight, a world government.

Disadvantages of the social and economic development, fortunately, also a historical advantage of Russia. Technological backwardness of the economy, illegal forms of life on the basis of the concept of consciousness, passing from one generation to social evils, especially poor quality of life, preventing be happy, leave open the possibility of the economic growth in the longer historical term.

Russia in all spheres of the organization of the society will move to a system of the organizational and moral support to the pioneers of the high technologies, not including such approach, particularly the social technologies, but claiming trust of life and management subjects of Russia. Citizen initiative improves the efficiency of the functioning of the state institutions and society, should be allocated a place at the front of the queue necessities.

Perhaps I idealize this Futurological perspective of Russia. And again I will repeat: "This is the idealization that being taken into the service can quietly bring Russian society to the model being attractive to repeat other people."⁶

Derivation of Russia into five countries - the leaders of the global competition (in the top ten of the world's economic leaders) involves not only effective and continuous innovation to modernize the national economy. This requires anticipatory, relative to the period of transition to new technological systems, training and freedom from defects related to a holder is characteristic of the current phase of Russian history.

Exceptional historical presumption of the success in this area will be a number of people with no modern intellectual baggage, and the presence of the national management, capable of

⁶ Zalyvsky N.P., Smirnova I.V., Zalyvsky R.N. The strategy of "Russia-2020". The interaction of business and government. Arkhangelsk, 2011. p. 191.

stimulating its use to achieve at each micro-economic activities of the highest productivity. It is a factor of the active treatment to high technology savings, consistent positioning of the leadership opportunities in Russia transplantation of vital organs in the treatment of cardiovascular disease, cancer and other diseases. World social achievement of the country - it is the largest (in comparison with any other country) the number of high-tech operations, a minimum percentage of fatal results from them, the maximum longevity in the world of Russians. The dynamics of progress in ensuring the quality of health and life expectancy is important to take a synthetic character confirm Russia's leadership role in the world in all forms and aspects of its historical path.

Agreement with this idea of adding is legitimate its position that Russia can and should borrow successful foreign policy actions of other leaders of the world (USA, UK, China) to protect its sovereign national interests. But leaders can be called only at the initiation of new tools for solving the internal problems of Russian society, and response to external challenges of the wider political and spiritual support of Russia. Moral image of the country – is the most attractive force for psychological leadership. May return to Russia in 2011 32 thousands of compatriots is already a sign of this reputation.

***Through the symbiosis of the culture –ethnographic identity of the people
– to the planetary person***

Russia is now entering in the window space of the Eurasian civilization, which has no one close, so citizen's visa-free communication between Russia and Europe – is a natural and inevitable epilogue of the nearest future. Europe has no future without Russia, and if there is, for it to flawed economic and political risks. Cultural and historical practice, its the best example of the ability to transform into an important factor in the domestic and foreign policy⁷.

Russia – is a bridge between different civilizations and at the heart of the construction of the project is the idea of the spiritual and cultural unification of the Euro-Asian population of states. It is preceded by a strategic consolidation and spiritual and cultural rapprochement of the people of post-Soviet countries, and above all, the population of Russian-existent mental consciousness. 30-50 years continuous expansion of channels for their daily cooperation in all fields will supranational unions on various aspects of the social and economic integration.

One of the natural foundations of a partnership with the international community may be the recognition of the cultural identity of the people of other countries. Russia invited on its stage the creative world of humanity and showing on the sites of other countries cultural achievements

⁷ Malakhov M.G. Our man in the history. How the media can influence on the formation of the regional identity / history of the research and the development in the Arctic - from the past to the future: Sat. scientific. mp. Arkhangelsk: CPI 2012. p. 174-175

of their people, creates and increases the efficiency of the mechanism for smooth movement towards global leadership. This variant of symbiosis with the environment, perhaps the most powerful warranty presence on the political map of the world of the future of public education of Russia. I cannot live forever, but I want to believe in the optimism of the centuries in its old historical perspective of our state.

It does not absorb the international integration and the demographic symbiosis of people living outside the present territory of the Russian Federation, on two conditions.

Firstly, if the geopolitical vector of Russian's internal development is the continuous implementation path to a unitary state. Federated inter subjective relations should wither away as the Institute for the maturation of the historical conditions. At the first stage it can affect regions that include the modern view to the natural territory of the residence of the Russian people. The second stage takes the national district (area) located on their territory, in municipalities with their inclusion in the composition of the subject. The third stage involves the state unitarization of the regions of Russia - the autonomous republic; non-Russian ethnic group name is defined to a particular subject of modern Russia.

Naturally, the way to the transformation of the administrative structure of the state is long and complicated. But to stimulate this dynamics – is the institutional imperative of the modern history of Russia to her distant future to be modern and free from social circumstances with the potential of ethnic separatism. Will not see any obstacles to the political institutions of the correction to the leveling of the economic protectionism to minority ethnic groups. Future superpower is more appropriate allocation of the object of the public attention, not of an ethnic group with a traditional way of life, economic and geographic characteristics of life and the economic activity of the population STI, located on the territory of the subject of the Russian Federation (municipal education).

Normal development of Russia should be equality for all groups regardless of the size and specific ethnic culture to homogeneous factors of life. Response of an institutional practice will ousting the periphery of consciousness ethnographic collisions communication because common practice of life will require a universal solution to the socio-economic problems that interfere with normal socialization of the population corresponding subject of the Russian Federation.

Secondly, if the mass consciousness of the population state and society will jointly crystallize the ethno-social group – is the Russian-speaking community of Russians. Absolutely unacceptable that invisible and irrelevant to us yet and philosophical perspectives (political) opposition to it now - no barriers objective of the river of human history. Where are the Slavic tribes, ances-

tors of Russian on-kind noted in the "Tale of Bygone Years"? Growth of the population over 20 thousand years in the two thousand times as well as the reduction of tribes, groups, tribes, people - unstoppable part of the integration process of territories, business cultures and ways of life of the peoples. This process involves an objective trend and confirms acquisition diverse people united state education features one ethno community. At some point, the state and social development in the beauty of her sublimated multinational, multi-ethnic and multi-religious people of Russia today.

Objections to this channel of the internal consolidation of people do not cancel the proposed technology of the evolutionary modernization of the national and ethnic portrait of the Russian Federation. Theoretically, it can be assumed about the different options for addressing the problem of formation of assimilated people, but is counterproductive to deny any possibility of such prospect. In my opinion, the announcement today of the process to be impossible - a future form of distrust and objectivity of history itself. This is the first thing. I predict that domestic ethnic self-determination as an integral link of the history of our state in the next 100-300 years will go to their self-adaptive mode, the laws of the Russian people - the ethnic group, which has long been a socio-cultural linking of all people of Russia. Secondly, stir about a model community of people ethno-political roulette can only members of a particular ethnic group, whose thinking infected with the bacilli of nationalism. The future is clear to anyone who goes beyond such thinking. The associated people – are an inevitable concomitant of the forthcoming Millennium Russia. And the recognition of the possibility of the dissolution of one ethnic group to another people is a condition for the optimal transformation of national identity (feelings, culture) of numerous ethnic groups of the country into the Russian Unitarianism.

The trappings of the process of movement of the associated society will transition to linguistic homogeneity of the population of Russia. More dynamic culture of aging single historical existence is helping what is now about 80-90% of Russian population is able to use domestic Russian. For France, this process may be slower and more difficult, as there is significant number of citizens of the French language in the world to recognize it as a native, but nevertheless do not consider themselves French. In France, the difference between these figures - 35 million people, and for comparison, in Germany - 13 million people.⁸

Prediction of the ethno consolidation of the society and the natural dynamics in the context of the human history, assimilation of all social, ethnic groups in the country, which can anticipate the scientific truth: this process will allow fixing the vector of the unitary state in the period

⁸ Unequal Marriage: Germany and France / / Around the World. 2012. Number 5. p. 28.

2300-2600 years of the Russian history. When an accomplished ethno-genetic mixation of the Russian people, which will increase Russian geopolitical solvency for another few thousand years ahead.

But this is the only part of the futurological future of Russia. In his hands, the burden of the utopian or realistic acknowledgment of the historical outcome of our state and society. The second part of his success on the geopolitical horizon centuries of the future, the provision of maximum autonomy long Russian-speaking society in multilingual planetary community. It will also improve the lives of the world organization. The modern era of human life - is more than 200 countries, thousands of languages, large and small nations, it is being citizens with mental ethno consciousness, ethnic identity and culture. I presume that these differences still strong and vibrant start to shrink supra-ethnic needs, global needs of everyday practice of social communications, each country will be tempted to integrate the planetary collective choice between nationalism and social security of the planetary society, interested in the universal laws of being assimilated. Even the presence of seven spans on the forehead can not highlight the historic bridges of integration of peoples and countries in the global institutions of the world. However, some basic design trends of spiritual and cultural assimilation of peoples foreshadows modern practice. First of all, the degree of convergence of the historical drama realistic three global cultural and demographic processes. One perspective - for predominantly mono-ethnic (eg China), monolingual countries. The cycle of their existence is dependent on two factors: population, cultural ethnic motivation to single states (Europe, Asia, and America). Another alternative - for the states, home to two of the nation and dominated the two languages (eg, Canada, Belgium, Spain, UK). Different content possible history of development, which is difficult to even futuristic design, can be extended to the country with the number of ethnicities 100-150 (India, Indonesia).

Russia, in my opinion, has historically survived (outside until the people of the Caucasus), the most difficult battle of the ethnic groups (nations) for national self-determination within the state. She gained a unique experience in the construction of large multi-national state, whose population is more than 150 nations, specific experience of their development and mutual communication, enmity and friendship, various mental values and beliefs about the future. Now it may be the subject of an experienced consultant with a soft global process of socialization and humanization of acceptable human history.

Usefulness of the Russian experience of the international community will only increase, as the nationalism, in spite of tolerance and multicultural, it will still be a particular motive, highlight the status of one of the ethnic groups over another. Offer this experience to other countries, not

the regulatory imposition, also an additional channel for the creation of preconditions for strengthening geopolitical authority of Russia. Moreover, the point of the passage will update Belinski of the occurrence of each nation (people) desire to be the outbreak, for example, not only Russian (the Germans, the Chinese, the Americans), but part of a more inclusive society, such as Russian in the European spirit. Two centuries Russia displaces aziatizm of consciousness layman, seeks to strengthen the mental Europeanism, hurrying for the progress of civilization of European culture. Where, then, shows the vector of development of the European and Asian nations? What can target Europeans, going into the future? Take into account whether the Europeans Asians, increasing its representation on the stage of global history? We are still unclear mechanisms of their socio-cultural approach, the historical association in the single European society.

We can also suggest that the first stage of the future of humanity in each country, with a population using different languages, will be the rejection of the three-, bi-lingualism, and the transition to a common language of communication of citizens. Hypothetically, it is possible to wonder which of the modern languages, the most common current (English, French, Spanish, Russian, Chinese, etc.), will be in the next 2-3 years, the language of the thousands of the world community. Before that, a country will inevitably burst through the history of the nationalist struggle (war), the most radical advocates of linguistic and ethnic identity. Humanity will survive the most critical phase of its social and cultural evolution, but can not stop the internationalization of the people of the world, because the power requirements of the social progress multilingual state is above the desires and capabilities of individual ethnic groups.

Cultural affectivity of the integrate people – is an alternative to the quick disappearance from the historical and demographic scene. Any people (especially the fewer ethnic group or with a small population - 8-15 million people) should not be premature to temporarily close its identity, as it is crucial to build on Futurological demographic patterns of the integration in the world, cultural and demographic vanguard of the humanity in the face of clearly gravitating to the dominance in the distant future planetary civilization. People (ethnic group) of any state characterized by one or another system in a process of natural landmarks. And our intelligence justifying the horizons of the history of their development, it is not connected with razio. We can't be witnesses of the far future, but we are not allowed to pick up his contemporaries on the basis of our understanding of the nature of the future governance criteria, guaranteeing a competitive advance Russia's leading countries in the world at any stage of the historical process of interaction with them. We have no other evidence of a realistic strategy for the development of the country, but we are sure that no one takes away the right for Russia to go down to.

Perhaps these reflections about the place and the role of Russia in the future world - is the calculation for the phenomenal wonder of the world history. I don't want to have such association. Russia's mission is to be the first and to build the route of the preserving the cultural identity of all their people, providing maximum disclosure as an institution of pooling of the spiritual development of Russian society. It will take that in a positive and harmonious for all sorts of the extreme ethnic and national, to build and consolidate the channels of the spiritual and cultural consolidation of the universal norms of life. This is the premise of the exclusive process of the gradual historical self assimilation of all the ethnic groups with the Russian people. They trusted him the originality of their language and ethnic identity. Then a single whole Russian community and embody of the flavor of all the nations (ethnic groups), residing in the territory of the modern Russia. The variety of the single people will light the diversity of cultures and local economic activity accommodations Russians.

The policy should help to the confirmation in the global world of the authority of the social practice in Russia

Ethical and moral foundations of the geopolitical leadership of Russia in all ages will be useful if the government institutions of the state will not abuse the "science of subliminal man" under the pretext of improper design of his mind. They should base on the taboo, that "there is no state considerations which can be canceled" democracy choice of values in the life, and the more control of the life, dignity and conscience of each man, to adjust the harmony of the natural development of the society under the regulatory submission..

Recall about the basic requirements of the international prestige of the country forcing the past. Earlier, Russia has demonstrated the attractiveness of the social world of the Soviet system. So make sure its citizens, while changing the social order is not lifted the iron curtain on the real perception of the socialist practice. That is why it is appropriate to separate politics and science of building a society, because it is two sides of looking at the world in which we live.

Politicians are interested in the stability and the sustainability of the public authorities and public institutions that support them. Policies often take democracy institute psychological manipulation (fraud) with the mass consciousness and not an instrument of the dialogue between the state and society on arrangement of a reasonable quality of life for each person, each family, not just the corporate and government elite. Modern practice, starting with Russia in 1993, including the revolution in different colors in the African countries, confirms that the system of the government institutions often cease to function as the people's representatives. Then there is an escalation of the social and political protests of the population, then the people out on the street.

In front of the science raises another problem: to study the practice of these institutions, to assess the degree of compliance with the interests of the country without fear of identifying problems of the state and society, to offer their solutions and to put scientific knowledge at the service of society. Radical protest movements as a real historical conflict between power and people are one of the reasons of the ideological demarcation of power and science. Existing institutions, as a rule, generate disgruntled public abstract forms on the absurdity of unconstitutional change of the government. Science, however, can not deny the natural right of the people to change their government process that has matured in the society. Cause a change of government institutions illegitimate science sees no people, but the political regime itself, which proved incompetent guide of the history of his people.

Such moments of the mass reactions of the population – is a specific form of the moral self-respect, by the logic of the social modernization in the undemocratic society. If humanity has lived on the hook ideas fealty bad power, it would have long ago stopped to improve the mechanism of power and the development of the state. It would be forever a slave to one master (one tyrant, one party, one ghost, usually unrealized ideas, and so on). It is important to know that the longer the bureaucracy remains the most privileged group in society, does not solve the problems of the majority of citizens, the more society is to recognize their lack of freedom - political and economic, the more dynamic inflow of people into the columns of the political opponents.

Russia is no exception to these laws of the social development. However, it has two individual holdings of the socio-political processes at a level that is almost enough to demonstrate the involvement of Russia in the Western establishment of democratic values. First, the government is able to undermine the position in a timely manner to any political opposition and public figure when he comes to the status of a significant subject of political life. Second, these subjects, being natives of the existing institutions of executive power, are often amazed genome social cowardice and insincerity of public policy, so they are not there mass public trust.

Such a long introduction, we had to, because the future of Russia always represents a compromise between the latest world views, the experience of their use by the subjects of the historical practice and the ability to correct its defects (errors). The potential impact on the world hegemon must remember that the world authority of the country preceded advanced the social policies for the development of every nation (ethnos), all citizens of the state. For the first violin providing innovative attractiveness of the practice of the social development of the country taking the strategic policy of the social development of Russia and its ideological line extension task in

the geopolitical corridor for promotion (replication) of the social and cultural achievements of our country.

There is no need in creating the illusory notions, in the research of metaphors to accomplish this. Penetration in certain areas of the global space is to use the open road, a standard for all members of the international process. This cultural and educational exchanges, international trade, migration support (tourism), the activity of foreign investors and business players operating in the markets of other countries (especially in the developing and highly industrialized countries), cooperation in international organizations, representing the institutions of global impact on the world.

Russian's commitment to these institutions of the contact with the outside world, which will accelerate the integration of its role as the subject of the formation of not only the lasting stability of the world, but also, due to the successful implementation of this function, the geopolitical prestige of the national practices of the social development for future generations of the states.

What conclusions follow from the arguments? In its approach to the definition of the global channel leadership of Russia is not dominated by the idea of the exclusive right of Russia to be the first on the planet. With an abundance of candidates for the centers of the multi polar world that is no longer a secret and certainly does not negate the assumption that the structure of these centers can dramatically updated every 50-70 years, it is foolish to associate our Russia party of the world process, the smartest farsightedness. The question is not whether or not to develop Russia. Natural historical evolution cancels any historical cataclysm. Theory of leadership is needed for other useful things: to prove the inevitable elimination of Russia from the forefront of history, if it will not play the social forces that could give impulse to the development of the country's continuing growth of the productive forces and ensure a stable place in the top five in all conflicts super-historical progress.

This task is supported by the development of the spiritual infrastructure of the historical fate of Russia - the formation of the historical optimism in each of new generation of Russians. This is one of the least visible resources of the society, one of the most solid pillars indispensable advancing average dynamics, which, being tomography everyday states of souls of Russian citizens, could prevent the state slipping beyond twenty leading countries in the world.

His arguments, however they were not speculative or fantastic, I base it advanced social role of Russia in the world and for the world. Not associate a set of previous defeats Russia, its technological imperfections, resource curse, dislike and suspicion of the Western world to the Russian world barrier to cultivating global leadership mission in Russia. Any sores passed its histor-

ical roads, minor fixed under its banner of science and technology (eg, Nobel) and cultural ups do not cancel the possibility of being more advanced subject of the historical building. After all, who bit a lot of time, the faster the great-looking methodology for the victory.

World history - is not a lightning war, for which one needs a commander in chief. This social development, the primary role of which belongs to the people and the union leaders. People "do not shoot" in the back of manager development (social, business), where the union is based on the reasonable consensus of the present and the future of man.

The needs of different eras of his life are inconsistent, but who finds harmony between the ruble and the conscience will inevitably become a strategic leadership of the mission of Russia and the moderator of the humanitarian organization fair of Russian society. Who trust in God, he is not conscious of the subject in the history of his homeland. Russia need to believe in a man who combines the energy and imagination of this being the day of the future, pragmatic self-interest of the working day and the ideological optimism movement for personal happiness.

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Stockman can't be frozen



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Abstract

It is analyzed the situation of the development of the Stockman field in the Arctic region, which is happened in 2012

Keywords: *Arctic, shelf, Gazprom, Stockman, gas.*

The adoption of the radical solutions to the development of the Russian Arctic, in the continuing of the work on the Stockman field, the search for a balance between the economy and ecology have now become a special geopolitical significance. Russia has a real choice and the opportunity to the continue in the few more years, or maybe decades, the development of the hydrological deposits on the land. Yet the window of available capacity becomes smaller, the trend has to be closed. According to various experts, the hydrocarbon deposits in Russia, located on the ground, mostly exhausted their resources, their production is up 60%. The problem arises of how to preserve Russian's competitive advantages in the coming decades, there is still a dynamic demand for oil and gas. The main hope for Russian's hydrocarbon production growth in the foreseeable future in the continental shelf, particularly in the Arctic. But the share of the offshore projects in the total oil and gas production in Russia is estimated at between 3 and 6%, maybe even less. Jacques de Buassezon, General Director of "Total Exploration and the Development of Russia", opening VII Annual Conference "Shelf of Russia", which was held in Moscow from 26 to 29 March 2012, in his speech said that 20-25% of oil and gas in the world is produced on the offshore fields. In Russia, this figure is almost equal to zero, although there is a huge potential становится континентальный шельф, прежде всего в Арктике¹.

Each Arctic country in the race for tomorrow's Arctic resources has its own motivation, to which attention was drawn to the article by Andrew E. Kramer, Clifford Krauss, published in the "New York Times": "Russia develops offshore drilling in the Arctic"². As the depletion of oil fields in Siberia with no new developments of oil production in Russia in 2035 could fall by nearly a million

¹ Shelf of Russia: the key to the success in the alliance with the leading oil and gas campaigns of the world. URL: <http://www.safeprom.ru/articles/detail.php?ID=16268> (date of access: 07/16/2012). The conference was organized by The Energy Exchange (UK) with the official support of the Ministry of Energy of the Russian Federation, the Federal Agency for Subsoil Use and Arctic Forum of EU.

² Kramer Andrew E., Krauss Clifford. Russia Embraces Offshore Arctic Drilling. URL: <http://www.nytimes.com/2011/02/16/business/global/16arctic.html> (date of access: 02.08.2012).

barrels, as the data International Energy Agency. Since oil and gas are the basis of the Russian economy, giving the country some 60% of all export revenues, Russia sees no other option but to move into the ocean. But as we move to the Russian maritime domain oil companies faced with the fact that other countries are facing the Arctic Ocean, above all the United States and Canada, with great caution related to the development of oil fields in these regions - based on environmental considerations and safety issues. Processes of the global reset of the Arctic is the most directly related to the balance between economy and ecology. The main problems that arise here are related to environmental hazards, safety issues drilling offshore wells in the harsh conditions of the Arctic.

С 2005 года Россия является лидером по объемам добычи углеводородов On the Russian shelf was opened the largest fields (Stockman, Rusanovskoye, Leningrad, Dolginskoye, Prirazlomnoye, etc.) of oil and gas reserves of about 10 billion tones of oil equivalent (CE)., Four gas and condensate fields (Kamennomysskoye-Sea, North-Kamennomysskoye, Ob and Chugoryahinskoye) confirmed foulness sea for four other deposits (Semakovskoye, Anti-payutinskoye, Thoth and Yakhinskoye Kharasaveiskoye), which provided gas reserve of 1.5 trillion cubic meters. Since 2005, Russia is the leader in terms of the production of hydrocarbons in the Arctic shelf, outpacing the total production of the United States and Norway. Conducted by members of RAN Laverov N.P., A.N. Dmitrievsky, corresponding member of the Russian Academy of Sciences V.I. Bogoyavlensky the analysis of the resources, reserves and production of hydrocarbons has shown global leadership of Russia for a number of positions, including the resources and reserves of hydrocarbons on the land and on the shelf of the Arctic³. Naturally, the question arises as to why Russia is an authoritative opinion of Academicians of RAS, one of the first in the world to begin the development of the Arctic shelf, having such a rich resource base, provides the learning and the development of the Arctic shelf at rates significantly lagged behind the other states, what are the causes of low investment attractiveness of the mineral resources of the continental shelf of Russia?

To answer this question, we turn to a competent opinion of the deputy chairman of the State Duma of the Russian Federation about the Natural Resources and the Environment of V.M. Tarasyuk and the Minister of the Natural Resources of Russia of S.E. Don, has all the information on this issue.

³ Laverov N.P., Dmitrievskiy A.N., Bogoyavlenskiy V.I. The development of the marine natural resources in the Arctic // The strategy of the Russian maritime activities and the environmental economy in the Arctic. IV National Marine Scientific Conference: conference materials. Murmansk, 7-8 June 2012 Murmansk Acad Bauman, 2012. URL: <http://ocean.mstu.edu.ru/docs/materials.pdf> (date of access: 19.06.2012).

Continental shelf of Russia: the reasons of the slow cultivation

Donskoy S.E.	Tarasuk V.M.
<ul style="list-style-type: none"> a) lack of available mechanisms of the economic stimulation; b) severe natural-climatic ice conditions, specific to the Arctic shelf; c) the lack or the presence of the existing infrastructure, especially in the remote regions in the eastern Arctic; d) the lack of the technologies to efficiently and safely develop of the oil and gas in the Arctic shelf; e) legal and institutional regime, that does not lead to attract the necessary investment of the shelf. 	<ul style="list-style-type: none"> a) low geological knowledge, so far of the exploration of resources does not exceed 10%; b) unfavorable geographical location of the most fields and promising areas for more than two-thirds of resources are on the shelf of the northern seas (Barents and Kara Seas), which leads to higher costs for the research and the development of these deposits; c) poor infrastructure for the production and the transportation of extracted resources of the shelf; d) the changing of the tax regime; e) an underdeveloped legal framework, not taking into account the realities of the work on the continental shelf

Pic 1. It is created by the authors: S.E. Donskoy⁴ and V.M. Tarasuk⁵ (2012)

Speaking on the August 2, 2012 at the Cabinet meeting when discussing the "Draft Programme of the Russian continental shelf exploration and the development of the mineral resources in the long term" in the years 2012-2030 S.E. Don, the Minister of Natural Resources of Russia, said that the shelf is the only oil and gas province, within which the probability of opening of large and unique deposits of hydrocarbons. Meanwhile, in the exploration and the geological studies of the continental shelf of Russia is now significantly behind other oil and gas producing states. SE Donskoy led to compare a few illustrative figures. So, in the North Sea, an area of 130 thousand square meters. km as of June 2011 3366 drilled and exploration wells. In the Norwegian sector in the area of 150 thousand square meters. 1101 km drilled wells. In deep offshore Brazil, in 2008-2010 only 246 wells have been drilled, with the success of exploration drilling in these areas ranges from 40 to 65%. Against this background, the situation in the Russian sector looks depressing. In all 6 million square feet. km of the Russian shelf for the time to study it only drilled 257 exploration wells. In 2008-2010, the Russian shelf drilled 11 wells open only four fields. For comparison, in the same period in Norway drilled 10 times more holes (110) and, accordingly, the result was recorded 10 times - 44 deposit (Don SE). Russian Prime Minister Dmitry Medvedev, in his speech during the discussion of the draft program of exploration of the continental shelf of Russia

⁴ Donskoy S.E. The project of the exploration program of the continental shelf of Russia and the development of mineral resources in the long term, until 2030. URL: [http:// government.ru/docs/19902 /](http://government.ru/docs/19902/); [http:// government.ru/docs/19888 /](http://government.ru/docs/19888/) (date of access: 08.02.2012).

⁵ Tarasyuk V.M. The strategy of the development of the continental shelf of the Russian Federation. URL: http://burneft.ru/docs/archived_docs/articles_tek/2 (date of access: 08/03/2012).

noted that the program is 2030. "But this does not mean that you can safely wait for the year 2030, our competitors, and those who are engaged in general shelf in the world to work much faster than us, so we must act. In general, we must remember that every 50-70 years, the world is experiencing an energy revolution, and it is not clear where in the same period of time, we find ourselves with our hydrocarbons, whether we are interested in someone⁶.

Hydrocarbon production in the Russian Arctic shelf requires the use of the modern technology, a unique complex of engineering structures for drilling and production of oil and gas, infrastructure and facilities of the coastal component of oil and gas, reliable logistics, as well as the significant investment, changes in regulatory and tax base correction vector of the Arctic policy of the Russian state. In Russia it seems really limited choices, we must immediately go for oil and gas in the Arctic. *More September 22, 2011, Vladimir Putin said in Arkhangelsk during the second International Arctic Forum "The Arctic – is the Territory of Dialogue" in September 2011, which is essentially Russia really starts to develop the Arctic shelf, opens a new chapter in the history of the Arctic exploration and the economic activity here will increase.*⁷.

Problems, difficulties in the development of the Russian Arctic shelf are very vividly manifested in the strategic project of JSC "Gazprom" - the development of the Shtokman field, which is moving very slowly and is in the crisis due to a number of the reasons, analyzed and summarized by me on the basis of a study of the multiple sources, including:

- I. Due to the unstable economic situation in the world gas markets, changes in the market conditions in the connection with the ongoing European financial crisis, the trend of falling demand for gas and the price reduction.
- II. For braking Stockman is used widely publicized increase still expensive and environmentally hazardous production of shale gas in the U.S. and similar projects in other countries.
- III. Discovery of promising the new natural gas fields offshore warm Mediterranean, Caspian and other seas, where exploration, drilling, production is less expensive than in the harsh conditions of the Arctic, and plan for their development and logistics based on the latest technologies.
- IV. Technical complexity of the project, selection of gas liquefaction in the Arctic, which has led to disputes between the partners.
- V. Choice of the cost-ineffective model of the developing Stockman, investment, a significant rise in the project design process.
- VI. Underestimation of modern technology to produce liquefied natural gas using floating LNG plants, technological backwardness of Russia in general.

⁶ Medvedev D.A. The speech 08/02/2012. URL: <http://government.ru/docs/19902/> (date of access: 08/02/2012).

⁷ Putin V.V. The speech at the Forum 22/09/2011 at Archangel. URL: <http://premier.gov.ru/events/news/Dcdj\v dscnegktyb yf ajhevt16536/> (date of access: 04.08.2012).

- VII. Gazprom's lack of experience in the implementation of the development of hydrocarbon fields in the Arctic Ocean.
- VIII. There are legal and tax regime in Russia, according to foreign partners, not helped to facilitate the development of mutually beneficial agreements and strategic partnerships.

As it is known, "Shtokman Development AG" in 2008-2012, Gazprom owned 51% of the capital, the French Total - 25%, Norwegian Statoil - 24% (up to July 2012). The explored reserves (C1 category) are 3.9 trillion cubic meters. of gas and 56.1 million tons of gas condensate. The deposit is to be developed in three phases. Gas production at the Shtokman gas condensate field was planned for 2013, 2016-2017, but did not rule that the launch could be transferred to the 2018-2019. Initially through the development of the Shtokman project was planned that half of the 23.5 billion cubic meters. meters of annual production at the Shtokman field will go via Murmansk - Volkhov gas export pipeline "Nord Stream", and the gasification of regions, and the other half - the production of LNG. Foreign partners of the project, including the Norwegian Statoil and France's Total, have lobbied against the fuel in the "pipe" in favor of the construction of an LNG plant. However, the parties were unable to agree on further technical implementation of the project and, therefore, to make an investment decision. French side insisted on transporting gas and condensate to shore by a single pipe (split them on the shore), and Russia - the separation of condensate from the gas directly to the mining vessel and its shipment to the sea. Investment decision on the Stockman field in 2011-2012 postponed several times, and it is likely that it will be accepted only in 2013-2014. The reason for such a delay in the decision on Stockman was well-founded doubts about the effectiveness of shareholders on the financial and economic component of the project due to changes in the market conditions.

The growth of shale gas production in the USA has led to a significant decrease in gas prices in the USA market and the slowdown in the Stockman project. Specialists, however, differ greatly in the evaluation of the resources and reserves of shale gas, as they often operate on different concepts⁸.

⁸ Shale gas in the United States: intermediate results. URL: trubagaz.ru> issue ... the-day/slantsevyjj-gaz ... itogi / (date of access: 10.09.2012).



Picture 2. The estimation of the location of the shale gas by stratospheric analysis
Source EIA. URL: http://www.pronedra.ru/uploads/c/EI/EI6pgMZf66_orig.jpg

Overall impression is that the shale gas is still less cost-effective than natural gas production in the Arctic, and environmental risks in the extraction of shale gas are a serious threat to the population. But the uproar in the world around shale gas has really slowed down the implementation of the Stockman's project. However, given the pattern of the depletion of the traditional reserves of gas, shale gas is still not able to be in the near future of a good alternative to natural gas. In 2011-2012 the commercial production of shale gas is still conducted in the USA and Canada. According to preliminary estimates, in 2012, shale gas production in the USA of 220-250 billion cubic meters (in 2011 it was 194 billion cu m.). The cost of production of shale gas in the fields of American (August 2012) was in the range of 130-260 dollars per thousand cubic meters in Canada - 140-230 dollars per thousand cubic meters. At the same time, gas prices in the region are at about \$ 100 per thousand cubic meters. Thus, under the current pricing environment in 2012, shale gas production in the North America by pure gas fields for the most manufacturers is disadvantageous. In Europe, related to the shale gas drilling after the poor results of the first wells in Poland were more restrained. The Board of Directors of OAO "Gazprom" believes that at this stage of shale gas production in Russia is inappropriate due to the high availability of conventional gas reserves, the cost of production is significantly lower than the estimated costs of gas production from shale rock, and also carries significant environmental risks⁹.

⁹ Gazprom will continue to study the market for the shale gas. URL: <http://www.oilcapital.ru/company/183630.html> (date of access: 14/11/2012).

More significant competitive advantages are new fields of the warm seas, open recently (why produce oil and gas in the Arctic cold, if not exhausted deposits warm seas, the Middle East, the Caspian Sea?). In December 2011, Texas's company of the Noble Energy reported that found in the Mediterranean Sea gas field volume of 142-225 billion cubic meters. In general, Levantine basin, located between Cyprus and Israel, contains an estimated USGS, 3,455 trillion cubic meters of natural gas, or about the same number as in the Stockman field. Cypriot President Demetrius Christofias said that the countries are considering a gas pipeline 40 km of the subsea between Cyprus and Israel. Gas in the both countries will probably be liquefied at facilities located either in Israel or Cyprus. Later can be exported as LNG to Europe (via Cyprus) and in Asia (after Israel).



Picture 3. The project of the gas pipe-line Israel –Kipr-Greece-Europe. URL: small_information_items_1747.jpg

In Israel, talked about the total elimination of the export of the hydrocarbons, which is directly affected by the plans of the Russian Gazprom. Energy around the Mediterranean shelf unfolds acute energy war between Turkey, Israel, Cyprus, North Cyprus, and Lebanon.

The financial and the economic component of the Stockman project in terms of the incidence of gas demand in Europe and reduce the price of gas markets, increased competition, and new discoveries certainly complicates the implementation. Stockman Development shareholders felt the need to reduce the cost of the first phase of the Stockman-ray project at least 10% to

make it cost-effective, to increase its profitability, from Moscow needed tax relief. In addition to fiscal uncertainty, the development of the project slowed down, according to the partners, operating a business model that is difficult to obtain financing and required revision. Shareholders did not like the technical configuration of the project. According to the foreign partners in Stockman, the transition to a one hundred percent of LNG allows to obtain access to more markets than is possible in the case of export of labor lines. Total capital of the project was assessed about 15-20 billion dollars¹⁰.

In the summer of 2012 Stockman's project entered into a protracted period of the crisis. In June 2012, members of Showman Development AG (State 450) received the notice of the dismissal. The budget of the company for the entire existence was about \$ 1.5 billion, half made Gazprom, and not all of the money went to the technical developments¹¹. Norwegian Statoil has put its share (24%) in the company of the special purpose Stockman Development AG, the major shareholder - Gazprom (51%) and put into invests in the project about 354 million dollars of investment. The head of Statoil, Helge Lund and Senior Vice President for Europe and Asia Torgeir Kydland resigned from the Board of Directors of Stockman Development.

Gazprom, in the current situation, in my opinion, has three options: 1) to establish a joint venture with other foreign investors, 2) to freeze the Stockman project, counting on the Yamal-Nenets Autonomous District, there by increasing production at Polar, Yamburg fields and to forget about Bovanenkovskoye with its huge reserves on the land 3) to change the technological component of the project, making a strategic bet on the construction of an underwater complex of gas, floating LNG plant in the production area by introducing a system of shuttle marine transportation of liquefied gas. The shortest interval of time to be with the first option, the longest – is the second. These are a combination of two or three options, a hypothetical failure of the foreign investors, and other combinations. The main limitations - investment, technology, ecology, - in different combinations will produce different results.

Stockman project - is, firstly, a business project, aimed at making a profit. It is only naturally that foreign partners of Gazprom so thoroughly consider the cost, calculate the risks, seeking relaxation in the tax regime. Stockman is undoubtedly one of the most expensive projects in the world. The cost of the developing the first phase of the Stockman field was, according to some estimates, \$ 15 billion and had a tendency to grow, in the part because of the risks in the harsh

¹⁰ Safronov E. The foreign participants of Stockman will aim to reduce its cost. URL: <http://www.rbcdaily.ru/2012/05/15/tek/562949983832481> (date of access: 07/16/2012).

¹¹ All employees of the operator Shtokman fired. URL: <http://lenta.ru/news/2012 / 06/19/away /> (date of access: 08.17.2012).

conditions of the Arctic (drifting ice, icebergs, cold temperatures, polar conditions), the need to build a gas pipeline to Teriberka longer than 500 km. For comparison, the project "Pluto" Australian Woodside Petroleum worth about \$ 15 billion, involves the extraction of gas from offshore fields, with its subsequent transportation to the 180-kilometer of the subsea pipeline to the on-shore gas liquefaction plant.¹² This project is similar to Stockman, but in more comfortable conditions.

However, there is a legitimate question, why project costs, available resources on Stockman and do not invest in other modern technologies, using benchmarking – is the best world experience? In Norway, for example, is being developed promising innovative projects related to the use of submarines for the production of hydrocarbons. Scandinavian scientists began the developing special submarines, which will move around in the water oil-producing facilities in the Arctic¹³. As reported at 30 January 2012 the British weekly newspaper "Sunday Times", such submarines regardless of the situation on the surface will be a few weeks to work in the extreme conditions of the North, which will significantly reduce costs for oil and gas companies and to reduce the environmental risks. Scientists at the Institute of Marine Research in Norway Trondheim have developed the design submarines, which, according to the engineers, can work under the ice for weeks and in the storm, ensuring proper installation and the safe operation of oil and gas production facilities. Vessels of 40 meters and with the ability to work at a depth of 450 m will accommodate crew of 10-14 people and carry the necessary equipment weighing up to 50 tons. Submarine design was presented to the developers of the international conference "Arctic Frontiers" held in Tromsø (2012) the energy in the Arctic¹⁴. Norwegian state oil company "Statoil" has already shown interest in these submarines, which are believed to be in the future will help to overcome the difficulties of extracting its operating systems in the Barents Sea. "Severe weather and sea conditions may make it impossible to function normal oil production equipment," - said research engineer project Benar Svenning. "Moreover, even when it works, greatly increases the risk of an accident, which could lead to oil spills," - he said¹⁵. "Ships can stand for about six months a year," - said Per-Ola Hedin, the Swedish shipbuilder company «Kockums», also involved in the project. According to

¹² Throw the development of Stockman is impossible. URL: <http://www.forbes.ru/sobytiya-column/kompanii/108894-brosat-razrabotku-shtokmana-nelzya> (date of access: 08/31/2012).

¹³ Scandinavian scientists began creating of the special submarines for full travel under water oil-producing facilities in the Arctic. URL: http://energobelarus.by/index.php?section=news&news_id=7424; <http://www.energostrana.ru/industry/11887.html> (date of access: 05/08/2012).

¹⁴ The Sixth international conference about "Arctic Frontiers" in Tromsø, from 22 to 27 January 2012 Energy of the Arctic territories. URL: http://www.norvegia.ru/News_and_events/happen-ings/Events/International-Conference-on-Energy-in-the-Arctic/ (date of access: 08.19.2012).

¹⁵ Scandinavia create submarines to move under water oil production complexes in the Arctic. URL: <http://burneft.ru/main/news/673>; <http://energo-news.ru/archives/89229> (date of access: 08/19/2012).

him, this leads to enormous costs for the oil companies, while the submarine can operate for several weeks without any problems.

Choice of the platform or submarine for the producing the hydrocarbons in the Arctic has its own strengths and weaknesses. Many oil companies have placed a piece of the equipment for the extraction of resources in the seabed, but the movement of the water processing facility, which would ensure the protection of plants from the effects of severe weather conditions, is currently facing enormous challenges. In particular, the maintenance of such plants may be made until efforts of the surface vessels, which threaten to freeze water, severe storms and the Arctic icebergs. Furthermore, the process is complicated by the long polar night.

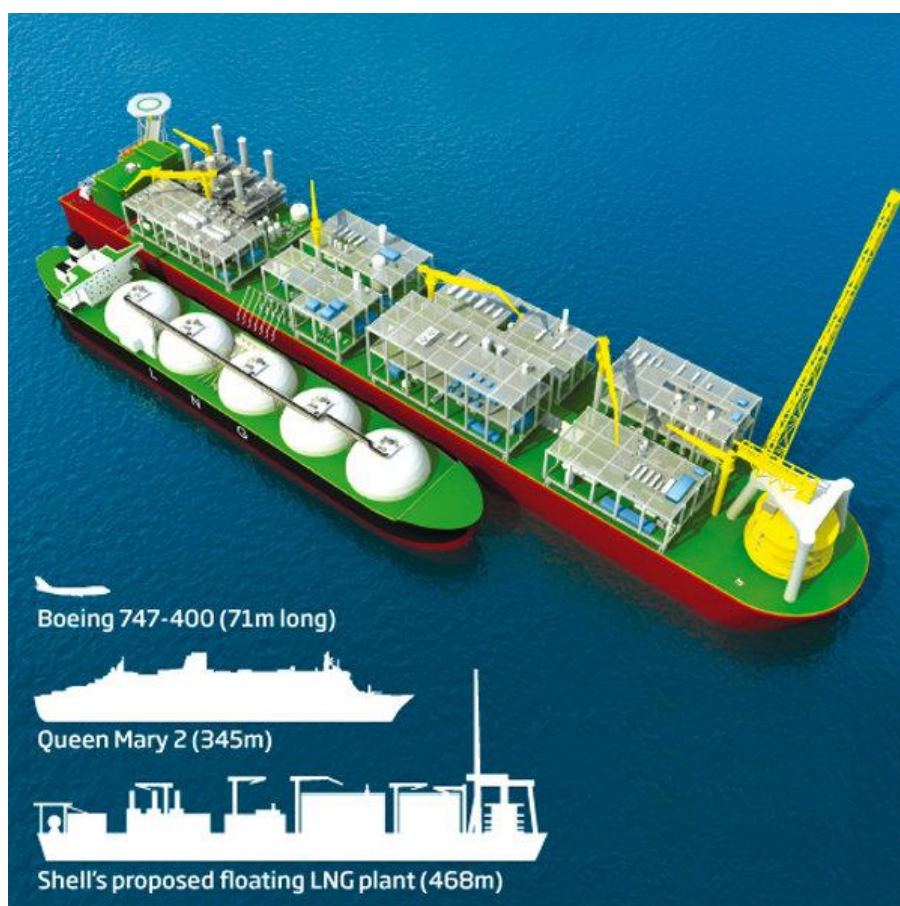
I think that the JSC "United Shipbuilding Corporation" JSC ("USC"), widely known Severodvinsk's and Petersburg's companies including OAO "PO" Sevmash ", JSC" Center of ship repairing, having the vast experience in the production and the modernization of the submarines, ice-resistant fixed platform "Prirazlomnaya", self-elevating floating drilling rig "Arctic" could no worse than foreign companies to cope with the construction of the submarines and other equipment for underwater extraction of hydrocarbons in the Arctic. The more so because of "USC" in the process of upgrading the first time in decades in Russia creates new shipbuilding facilities, including in partnership with global industry leaders. Thus, in the Far East in Bolshoi Kamen begins installation of the equipment in the first stage of the construction of large-scale shipbuilding center. Preparations are underway for the construction of a modern company producing offshore oil production equipment under a joint venture with Sino-Singapore Yantai Raffles. Successfully carried out the first phase of construction of the New Admiralty shipyard on Kotlin Island, near St. Petersburg as part of the joint venture "USC" to the Korean shipbuilding giant company - STX. In late 2010, JSC "United Shipbuilding Corporation" with the Finnish branch of the same STX formed a joint venture «Arctech Helsinki Shipyard», specializing in the production of complex marine equipment for operating in ice conditions. On the new shipyard will build ships for harsh arctic conditions, including ice-class tankers, gas carriers, supply vessels and maintenance of offshore platforms and the platform itself to produce hydrocarbons on the Russian shelf. Created a joint venture with the Corporation Saipem – is a division of Italian concern ENI, and with the concern Wärtsilä (Finland)¹⁶. Using the world experience of the world "OSK" can make the significant progress in the production of the modern equipment for the Arctic fields.

¹⁶ JSC "United Shipbuilding Corporation" at the end of 2011 consisted of 60 leading building offices, shipyards and ship repair enterprises of Russia, bringing together more than 70% of the domestic shipbuilding industry. In total, the members of the USC businesses and organizations employ about 74 thousand people. URL: <http://www.oaosk.ru> (date of access: 11/08/2012).

About another new technology that has the ability to find the application in conjunction with underwater complexes in the Arctic. In the world will appear more constructions projects and the use of the floating plants to ship LNG (liquefied natural gas). Floating LNG «Prelude» the coast of Australia, which Royal Dutch Shell plans to start operation in 2016, is estimated at \$ 12.6 billion. Gazprom's competitors today are actively promoting their new projects in mining and processing of liquefied gas, really ahead of Russia. Currently concern "Shell", for example, has seven existing LNG plants, four new projects are under the construction. In Russia, "Shell" participates in LNG "Sakhalin-2". This is one of the world's largest integrated projects of oil and gas. In 2010, the share of projects with "Shell" had 30% of the global LNG production.¹⁷ Floating plants of the company will be working offshore East and West Africa, Indonesia, New Zealand, Brazil, Venezuela, in the Mediterranean. Construction projects of floating LNG plants at some stage developed ConocoPhillips, Japan's Inpex, Chevron, Norway's Flex LNG, Brazil's Petronas and MISC Berhad (Malaysia), GDF Suez Bonaparte (SP Santos Australian and French GDF Suez). Analysts estimated the company Visongian volume of the demand "floating LNG" in 2010, 492 million. Sector expects rapid growth: according to Douglas-Westwood - to 7.4 billion by 2017, the time of launching the world's first floating LNG company «Shell». Floating plant will be double-hulled (to prevent possible leakage of product) A vessel of 480 meters and a width of 75 meters, and fully equipped with a filling, it will weigh about 600 tons. For comparison, it is six times more than the world's largest carrier. In stores can be up to 220 thousand cubic meters of LNG, 90 thousand cubic meters of liquefied petroleum gas and 126 thousand cubic meters of condensate. Floating plant will be able to withstand hurricane-fifth (highest) category and waves up to 20 meters without interrupting the production process. 150 meters tower is one of the technological elements passing through the ship, will be held in four groups of anchor chains (six pieces each), fixed to the piles with a diameter of 10 m and a length of 20-30 m, and fixed to the sea bottom¹⁸.

¹⁷ Shell. URL: http://www.shell.com.ru/home/content/rus/future_energy/itl_campaign/lng/ (date of access: 31.08.2012).

¹⁸ Anchor operator// «Business Guide (newspaper. Application to the newspaper «Ъ» № 35 (90). 07.07.2011. URL: <http://www.kommersant.ru/doc/1669376> (date of access: 15.11.2012).



Pic 4. Floating plant LNG «Prelude» near the banks of Australia (project).
 URL: <http://revistagalileu.globo.com/Revista/Galileu2/foto/0,,43236812,00.jpg>

Again the question appears. Shell doesn't build such plants ships LNG, and orders them in the South Korea, Samsung shipyard on the island Godgu. In Russia, apparently, is hardly possible to find domestic shipyards that could solve a similar problem in its entirety. Hence, we can calculate everything and booking project overseas campaigns. Moreover, that this experience is already there. At the Baltic Shipyard "OSK" (LLC "Baltic Shipyard - Shipbuilding") in 2012, carried the body laying helicopter landing ship dock (DVKD) of the "Mistral", which are constructed in accordance with the Russian-French agreement. "Rosoboronexport" and the French company DCNS in June 2011 signed a contract to build the first of two helicopters. United Shipbuilding Corporation attracted to the deal as a subcontractor French shipyard STX France in Saint-Nazaire. In the Baltic factory will be built 24 hull blocks (aft part of both ships), which represents about 40% of cases. The blocks will be sent to France where he will complete assembly of both helicopter.¹⁹ May Russia go in the same way through this scheme and in the oil industry of the waters of the Arctic Ocean? Careful consideration, calculate costs, opportunities, threats, and to make a qualitative leap in the development of the Stockman field and in the other Arctic oil fields through the use of the new

¹⁹ On the Baltic ship plant На Балтийском заводе заложен первый «Мистраль». URL: http://www.oaoosk.ru/news1705.html#newsname_1705 (date of access: 08.11.2012).

technologies: the underwater complex - Floating LNG - gas for delivery of liquefied natural gas to any port in the world.

Make an investment decision on the Stockman in late August 2012 it was again postponed indefinitely. Who benefits from today's decision to suspend the Stockman project? The answer is obvious - to competitors. Gas demand in the world does not decrease, but increases, new market niches for additional gas supplies due to the closure of nuclear power plants in Japan and Europe. Possible markets for liquefied natural gas can serve Europe and South-East Asia. Thus, Gazprom subsidiary Gazprom Marketing and Trading Singapore and Vietnamese company Petrovietnam Gas July 30, 2012 signed a Memorandum of Understanding on cooperation in the field of liquefied natural gas (LNG)²⁰. However, the Russian Ministry of Economics has reduced the forecast of exports and the price of Russian gas: in 2012 Russia exported 193 billion cubic meters of gas (in 2011 exported 221 billion cubic meters of gas), and in 2015 - 209 billion cubic meters instead of 253 billion. The average price of gas in the CIS in this case must be at 439 dollars and 393 dollars for one thousand cubic meters in 2012, and \$ 390 - in 2015²¹.

Здесь ведь Russian Gazprom, is again delaying a decision about Shtokman, surely it losing its competitive edge, dynamic and those opened niches, that are still available. Here, because it is not only about the Shtokman project, but other projects carried out in cooperation with international partners, to strengthen competition in the global hydrocarbon markets, using innovative technologies, a gradual, slow ousting Russia from the market. Russian Arctic rate in such a situation will increase manifold. If you can not freeze, we must continue to develop Shtokman, assessing the risks and applying the latest technology. There may be temporary loss that may pay off handsomely later, increasing the competitiveness of Gazprom. If you can not continue, then the priority is to develop the field on land preserved technological lag the industry for years to come. The question is how to do it all properly with and cost-effectiveness, and the geopolitical situation, keeping in mind also the ecology of the Arctic area, the positive image of the country.

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Russia remains on Shpitsbergen



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Abstract

The article considers the perspectives of the expanding of the national social-economic activities on the archipelago by the decisions of the government committee on the Russian presence on Shpitsbergen (December 2011).

Keywords: *Shpitsbergen, Barentsburg, Arctic coal, the strategy of Russian presence on Shpitsbergen.*

In February 1920, during the Versailles Peace Conference was signed the Treaty of Paris on Svalbard. Spitsbergen Square (islands and adjacent waters in the Barents Sea) was to be provided free economy, scientific and other peaceful activities of all the states - participants of this agreement. Now Spitsbergen in total permanent population of about 2700 people, 400 of which – are Russian citizens working in the mines of the public trust "Arktikugol".

December 31, 1997, Russian President B.N.Yeltsin signed a decree "On the Concept of Russian policy on the Norwegian archipelago of Svalbard." Pursuant to this decree Russian Economic Development Ministry has developed a comprehensive program to optimize and improve of the effectiveness of Russian organizations in the archipelago, whose main objective was to provide in the archipelago state interests of the Russian Federation on the basis of preserving and strengthening a permanent Russian presence.

In January 2001, referred to the concept of Russian policy on Svalbard has been amended, which approved the new Russian President Vladimir Putin. But the concept, and its amendments have not yet been published in the popular press, and their specific content is an almost unknown, not only a wide range of citizens, but many experts in the study of the Arctic.

Questions of Russian presence on Svalbard were discussed in February 2003 in Murmansk on the meeting of the Federation Council of the North and minorities. Discussion showed that the Russian presence in the archipelago is weakening.

Coordination of the economic and scientific activities of Russian companies in the archipelago of the inter-institutional committee to ensure the preservation of Russian interests, production and the research activities on Svalbard. In 2004, this commission was abolished.

The presence of any state in Svalbard is critically determined by the fact that it is the economic activity there. Active farms in the archipelago only Norway and Russia. The main economic actors Russians on Svalbard were and still trust "Arktikugol." December 17, 2004 Board of Accounting Chamber of the Russian Federation made a decision № 43 (413) "On the results of the audit of the financial condition and use of the federal budget allocated to the Federal State Unitary Enterprise" National Trust "Arktikugol" in 2002-2004 (the Norwegian archipelago of Svalbard). "It was given a sharp evaluation of its activities. The proposals, which concludes with the decision was, in particular, reads: "Send the submission to the Government of the Russian Federation, in which he noted that in the years 2002-2004:

- Performance of the FSUE "Arktikugol" declined sharply and tend to further deterioration;
- The current management structure of the Russian organizations on Svalbard is inadequate and does not allow efficient use of the budget means, and the means of marketing products and services. Interdepartmental Commission for the conservation of Russian interests, industrial and scientific activity in the archipelago of Svalbard, to coordinate the work of Russian organizations, abolished;
- The real work is associated with alternative activities on Svalbard, including the exploration for oil and gas, the use of biological resources in the coastal areas, tourism and others, as stipulated in the concept of Svalbard (1997), is not implemented, including those not infrastructure is used effectively preserved cast of a village at the mine "Pyramid";
- Only mine is mine "Barentsburg" extracting coal from one longwall due to the finalization of the coal may cease production until 2010. However, the construction of new and reactivation of old mine "Grumant" almost not made.

Offer, given the geostrategic importance of Svalbard to the Russian Federation to consider at a government meeting set of issues related to the activities of FSUE "GT" Arktikugol "Archipelago"¹.

Since then, the issues of ensuring and strengthening of the Russian presence on Svalbard repeatedly discussed at the highest level. However, the main directions of the Russian activity in the archipelago as a whole did not change. Not changed and the main approaches to implementation and implementation techniques. But if the theory it was relatively clear and stable, in the practical implementation of the Russian policy on Svalbard is not everything went smoothly.

¹ Report about the audit of the financial condition and use of the federal budget for the federal state unitary enterprise "State Trust" Arktikugol "in 2002-2004 (the Norwegian archipelago of Svalbard) / / Russian Audit Chamber. 2005. № 5 (89). URL: http://budgetrf.ru/Publications/Schpalata/2005/ACH200703101757/ACH200703101757_p_003.htm.

Due to the fact that Svalbard is an area of the special national interests of the Russian Federation, in order to ensure the Russian presence on the archipelago government decree on April 10, 2007 № 216 is formed by the Governmental Commission of the Russian presence on Svalbard, headed by Deputy Prime Minister of Russia S.E. Naryshkin. Government commission meets once every six months, not counting the special meetings.

The main tasks of the commission:

- «a) To develop a common strategy for the Russian presence on Svalbard;
- b) Ensure effective communication and coordination of the activities of the federal executive authorities in the implementation of the State policy on Svalbard;
- c) Preparation of proposals on the activities of Russian companies on Svalbard, including requiring the decision of the President of the Russian Federation and the Government of the Russian Federation»².

July 19, 2007 the commission of the Federation Council of the North and minorities considered "The presence of the Russian Federation on Svalbard: political, legal, economic and humanitarian aspects." The decision of the committee, prepared with the participation of representatives of the Ministry of Foreign Affairs, the Ministry of Economic Development, Ministry of Environment, the Navy command, FSUE "Arcticugol", analyzes the situation and wide list of recommendations on what needs to be done to ensure the national interests of Russia and the presence on Svalbard.

The Assistant of the Deputy Chairman of the Federation Council of the RF V.P. Artamonov said, "Then, it was recognized that the basis of the Russian presence on Svalbard have been and remain an economic and scientific activity. It was therefore recommended that the Government of the Russian Federation:

- take the necessary steps for the development of the economic activity on Svalbard, including by increasing coal production and to achieve its profitability;
- develop alternative economic activities, including the processing of harvested marine resources and tourism development;
- Together with the Russian Academy of Sciences set the agenda for the research and the development of the scientific institutions on Svalbard;
- Develop and approve a long-term federal target program for the preservation and strengthening of Russian presence on Svalbard;

² The governmental commission of the Russian presence on the archipelago Shpitsbergen. URL: <http://yurportal.ugra-gateway.ru/statestructures/37/43/8903/8921/>.

Then there was a clear need for the action of the foreign character of to preserve the Spitsbergen Treaty of 1920 and upholding the rights of the Russian Federation to engage in the economic activity not only in the archipelago and its territorial waters, but the 200-mile zone around Svalbard "³.

In July 2007, a government commission headed by S.E. Naryshkin visited Spitsbergen. On the norwegian territory, the Deputy Prime defiantly held out session of the Russian governmental committee on the Russian presence on Svalbard. Norwegians, it is proposed to evacuate Russian specialists had demonstrated an increase budgetary allocations to the Russian coal mining, which is gradually replaced with fish processing, tourism and research activities. Vice Premier S.E. Naryshkin explained the purpose of his visit only geopolitical reasons: "Svalbard for us - a strategic point that allows us to be present in the western Arctic. Under the contract, we have to lead this economic activity. With funding from the state in infrastructure, we would like to find activities that would provide themselves "⁴.

As a result of this trip S.E. Naryshkin was able to attract the attention of the Norwegian authorities to the Russian presence on Svalbard.

April 8, 2009 in a round table on the topic "The national interests of the Russian Federation on Svalbard." Committee of the Federation Council's International Affairs Committee, invited to a discussion of parliamentarians, representatives of the ministries and departments, scientific organizations. The meeting was Deputy Chairman of the Federation Council, M.E. Nikolaev. In his opening remarks, he reminded participants that the round table "The national interests of the Russian Federation on Svalbard" is held after determining the state policy in the Arctic.

Member of the Federation Council Committee on the International Affairs V. Malkin described the situation: "The Russian presence on Svalbard must be identified, while the same can not see it." Chairman of the Federation Council Committee on the Northern Affairs and Indigenous People, G.D. Olga, Nick stated, "... as long as Russia was active in the economic activity on Svalbard, questions about our presence there did not arise. They began with the sharp decline in economic activity in our country, with the active capacity Norwegian presence. The world does not tolerate a vacuum - if someone leaves, it's always someone takes place, and not always the one

³Artamonov V.P. Spizbergen – is a permanent Russian presence in the Arctic. URL: <http://1sakhapresident.ru/index.php/ru/2008-12-30-01-55-52/35-2009/273-2009-04-09-10-43-45>.

⁴Russian will not go from the island. URL: <http://www.tv21.ru/index.php?menuid=1&newsid=1045&date=&page=26&ngroup=4>.

who would like to see ... <...> ... Svalbard would really develop fishing and seafood processing, scientific activities and tourism, but it requires a very sequenced"⁵.

In July 2009, the Accounting Chamber, chaired by S. Stepashin examined the effectiveness of the use of the federal budget funds allocated for 2006-2008 FSUE "State Trust" Arkticugol "presentation and execution of the Accounts Chamber of the examination in 2004. "As demonstrated by check, federal funds provided in 2006-2008 to fund the activities of the trust and the Russian organizations in Spitsbergen in the amount of 2.17 billion rubles, used inefficiently. <...> ... In the audited period was no comprehensive program to optimize and improve the effectiveness of Russian organizations in Spitsbergen, which determines the main directions of spending. Expenses incurred in 2007-2008, focused on the solutions to emerging current issues related mainly to the maintenance, not the strengthening and development of existing Russian presence on the archipelago"⁶.

In December 2011, chaired by the Deputy Prime Minister Victor Zubkov at the meeting of the government committee on the Russian presence on Svalbard. Commission endorsed the strategy of Russian presence on Svalbard 2020 (this project was prepared and submitted to the Russian government for the consideration in 2008.) The document analyzes the specifics and the main components of the Russian presence in the archipelago. The strategy is aimed at ensuring Russia's interests in Svalbard through optimization, efficiency and diversification of economic activities through the development of polar tourism and processing the catch. The basic directions of the strategy: foreign policy and international law support the Russian presence on Svalbard that improving governance and business entities in the archipelago, quality of life, social security protection and safety of their workers, economic development, life-support systems. For each area stated key objectives and mechanisms for their implementation. Overall coordination and control of the joint work provides the Governmental Commission for Russian presence on Svalbard.

The members of the commission noticed the strategic importance of the Arktikugol. There was a positive trend in the development of Russian tourism, preserving of the ecology of the national and international scientific research, infrastructure renewal Arktikugol the archipelago. To improve the efficiency of work of Russian companies in the archipelago was necessary to ensure an adequate level of funding. "It is important for the optimal parameters of budget financing of Russian organizations in Svalbard, - V. Zubkov. - To solve this problem it is necessary to develop

⁵The problems of ensuring Russian's national interests in Svalbard. URL: http://council.gov.ru/print/inf_ps/chronicle/2009/04/item9518.html.

⁶ Court of Auditors: federal funds allocated to "Arktikugol" (Murmansk region), spent inefficiently. URL: <http://www.regnum.ru/news/1183043.html>.

public-private partnerships and the expansion of Russian activity on Svalbard "⁷. Pointed on the protracted nature of the implementation of the decisions of the Committee on the Transportation, to improve the quality of the health services, the construction of fisheries. Construction of the fish factory and research center has been named as a priority.

It should be noted, that such thoughts were expressed in 2009 at the round table "The national interests of the Russian Federation on Svalbard." Then G.D. Oleinik focused on the state support of the working on Svalbards organizations and citizens. "You can refer again to the example of Norway. Working in the northern areas of the country of the economic entities and citizens has significant tax benefits. Moreover, these benefits are differentiated according to the climatic conditions. Naturally, they are the maximum on Spitsbergen. The size of these benefits is such that the ability to live in these areas is economically advantageous. Unfortunately, in many of the northern territories of Russia, even economically developed the northern warranty and payment is currently not fully compensated, compared to the rest of the country, the cost of human life"⁸.

What are the perspectives of the realizations of the noticed directions?

Coal mining. The basis of the economic activities of Russia in Svalbard in the coming years continues to be the coal mining. But the perspectives of the growth in the Russian coal mining are very problematic. Creation of the protected areas on land and Tundra Grumant Bogemana shall limit use of the part of the owner of these sites - trust "Arktikugol" contrary to Article 7 of the Treaty of Paris. Now all the mines, except one, are conserved in Barentsburg. As the information agency "TV-21", the miners, mostly Ukrainian citizens have to annually produce at least 120 tons of coal, of which 40 tons of leaves on their own needs. But produce less, they can not: it requires the safety of the mine. Norway has repeatedly offered Russia turn unprofitable production and evacuates specialists. According to the Russian consul in Svalbard Vyacheslav Nikolayev, "in 1993 we have not once had to fend off such proposals"⁹. About the difficult situation with coal mining G.D. Oleinik said, "It is not profitable in recent years, and now the situation is even worse in the mine fire last year and a sharp drop in coal prices. And yet, in our view, to abandon coal mining on the island in any case can not be - it's the only significant form of the economic activity. We know that there is the development of the mining projects in the future. It is clear that they are expen-

⁷ Governmental commission charged with making to the government until June 10, the draft strategy of the Russian presence on Svalbard. The archipelago may appear the department PINRO. URL: <http://www.b-port.com/news/item/61772.html>.

⁸ Oleinik G.D. The speech of the Chairman of the Federation Council of the North and minorities at a round table on the "national interests of the Russian Federation on Svalbard", conducted by the Federation Council on International Affairs (April 8, 2009, Moscow). URL: <http://www.severcom.ru/files/upload/actions/090409122254.htm>.

⁹ Russians will never go out from the island. URL: <http://www/TV-21/ruindex.php?menuid=1&newsid=1045&date=&page=26&ngroup=4>.

sive. But the state has the potential to attract private businesses to implement, may not be as cost-effective, but much-needed state projects"¹⁰.

Fish processing. The already-mentioned round table in 2009, G.D. Oleinik expressed doubts about the reality of the near-term plans for the development activities in Svalbard in the fish processing. "For years, the possibility of the building on Svalbard of the fish processing plant, but doubt its potential profitability, or, more precisely, is unprofitable. Ros fishing said that the decision to build the company accepted. But, nevertheless, I would like to hear, but as will be addressed economic issues of the project? Would not that construct the plant, fishermen will have to pass the catch and export products will be no one or no place, or the cost will be too heavy for the population? Thought if these questions?"¹¹

In early 2009, the head of the Federal Agency for Fishery A. Krainoy said that in Barentsburg is about to begin the construction of the fish-processing factory. He said: "With the advent of the Russian factory fishing vessels will be more convenient to take the fish. After passage of the fishing area to Barentsburg only takes an hour ... <...> ... will build factories Norwegian experts, because this state is very strict environmental laws. Norwegians themselves easier to precisely comply with these laws. The appearance of the factory will help solve the issues of employment of the Russian population in Barentsburg ... <...> ... Design object will be completed in 2009"¹².

But in July 2009 at the meeting of the Accounting Chamber noted that "in the absence of the coordination between the agencies is responsible for the development of alternative activities on Svalbard, in 2005-2006, out of the federal budget allocated to the enterprise in the development of the project documentation for the construction of a fish processing complex in the settlement of Barentsburg on Svalbard in the interests of the FSUE "National Fish Resources", without achieving the desired result has been spent 1.8 million rubles. The draft of the end of 2006 was a negative opinion Glavgo expertise Russia. The main observation is non-compliance of sanitary regulations, the lack of treatment facilities, as well as approvals from the Norwegian side. For two years, not to take action to remove the comments and make proposals on the possible use of the project. At the same time, in 2009 the Federal Program "World Ocean", subprogram "Development and use of the Arctic" will be allocated Ros fishing of about 5 million rubles for the develop-

¹⁰ Oleinik G.D. The same place.

¹¹ Oleinik G.D. The same place.

¹² Russia will build the plant by the arms of Norwegians. URL: <http://www.rosinvest.com/news/491325/>.

ment of the project documentation for the construction of a fish processing plant in the town of Barentsburg"¹³.

In December 2009, the order of Rosfishing FSUE "National fish resource", as reported by RIA Fishnews.ru, was "transferred a number of powers of the state customer "capital investment "in the village of Barentsburg, Svalbard under the state contract between PAR and JSC" Giprorubchoz. "In particular, "National fish resource" is responsible for the monitoring on the design and working drawings, as well as to finance the building of the production complex for the processing of fish and other seafood harvested in the waters adjacent to the Svalbard archipelago in the village of Barentsburg. This object is included in the list of buildings and facilities of the federal government use. At FSUE also charged with the verification of the information contained in the documents presented by contractors for work performed, record-keeping and control of budget spending in line with the technological structure of the capital investments"¹⁴.

At that time (in December 2009) was "approved by the state order for the execution in 2010, the research and the development activities under the Federal Program" World Ocean "sub-program" Development and the use of the Arctic "for activity" Development of the proposals for the development of the fishing industry on Svalbard "on" Perspectives of the aquatic marine waters of Svalbard as an additional resource for the local fishing "at the only performer for the needs Ros fishing"¹⁵. Thus, the establishment of the fish processing facilities in the archipelago begins to approach the phase of the practical implementation.

Fishing. One of the serious problems that complicate Russian-Norwegian relations is the fish catch in the area of Spitsbergen square. This fishery is regulated by a special agreement between Norway and Russia, within which the Intergovernmental Commission for Fisheries (SRNC). In 1982, the UN Convention on the Law of the Sea has allowed coastal states to exercise sovereign rights over the continental shelf "for its exploration and the development of natural resources." However, Norway is understood that Svalbard has a special status, so the introduction of the EEZ around the archipelago did not dare. Instead, the fishery conservation zone was established Svalbard, which is not subject to any treaty. The result was the situation, which generates constant conflicts.

¹³ Court of Auditors: federal funds allocated to "Arktikugol" (Murmansk region), spent inefficiently. URL: <http://www.regnum.ru/news/1183043.html>.

¹⁴ National fish resources should develop Spizbergen. URL: <http://fishnews.ru/news/10818>.

¹⁵ Approved by the state order. URL: <http://www.fish.gov.ru/presscentre/news/Pages/%D0%BD%D0%BE%D0%B2%D0%BE%D1%81%D1%82%D1%8C%2000031.aspx>.

SF appreciated the reasons of these conflicts: "There is a mutual understanding, that in contrast to the order in force in the Norwegian economic zone, checking of Russian ships in the Norwegian inspector's of the fishery protection zone around Svalbard are not subject to arrest and are not required to sign the protocols of violations. However, information on violations referred for further investigation and action by the Russian side. The problem is that the Russian law Responsibility for poaching on the high seas, who, from a legal point of view, the fishery conservation zone of Spitsbergen. Therefore, the Norwegian access to the Russian authorities for the most part has no consequences for the perpetrators. After the privatization of the Russian fishing fleet significantly decreased discipline and responsibility of the captains, and many of them are directly stimulated by the owners to fish bio poaching methods and violation of quotas. In turn, the Norwegians, feeling slack after the collapse of the Soviet Union, began to tighten control in the Spitsbergen fishery protection zone and proceed to enforcement action against Russian ships"¹⁶.

N. Carelskaya analyzed that in the period from May 2010 to the present, the Norwegian Government has adopted 26 documents governing the conduct of the fishing activities in the areas of Norway - fishing (RPG) (zone defined around the Norwegian island of Jan Mayen is 200 miles away), fisheries protection (ROSE) (area established around Norway Svalbard away 200 miles) and exclusive economic (EEZ) (area established by Norway along the coast at a distance of 200 miles). For comparison, from February 2005 to April 2010 the Cabinet of Ministers of the Kingdom was approved only 12 of these regulations. On September 1, 2011 came into effect an order of prohibition of fishing with bottom fishing gear (trawl, seine and longline) at a depth of more than one thousand meters in the Norwegian EEZ and RPGs around Jan Mayen Svalbard and roses. The implementation of this type of fishing will be possible only after obtaining special permission of the Directorate and under strict conditions (including the availability of a detailed protocol gear, diary keeping and reporting, as well as the possible presence of an inspector on board)¹⁷.

As noted in November 2010, the General Director of the Union of Fishermen of the North V.F. Nikitin, before the signing of the maritime delimitation in the Barents Sea, the Russian fishing fleet working in the fishery protection zone around Svalbard, guided by the telegram former deputy chairman of the State Fisheries Committee of the Russian Federation M. Dementieva of 2001. "It says that at the entrance to the zone Spitzbergen captains allowed to sign the popular Norwe-

¹⁶ The international legal regime on Svalbard / / Analytical Bulletin RF FA. № 12 (379). 2009. URL: http://www.budgetrf.ru/Publications/Magazines/VestnikSF/2009/VSF_NEW200909171641/VSF_NEW200909171641_p_008.htm.

¹⁷ Karelskaya N.O. How are singing the notes or the features of the «Arctic communal». URL: <http://inforos.ru/?module=news&action=view&id=28186>.

gian party assets and liabilities (the data that is on the board at the entrance to the Norwegian economic zone and exit. - VN). And also - acts conservation checks drawn Norwegian Bohras checking the Russian courts. <...> Have never information on assets and liabilities, working in the archipelago, we Norwegians were not given, considering that they did not install near Spitsbergen its fisheries protection zone, as evidenced by a note of protest to the Russian Foreign Ministry in 1997, directed towards Norway. Naturally, and acts of conservation audits, we also did not recognize and did not sign, though the Norwegians and arrested us.¹⁸.

Repeated incidents with Russian courts, which delayed the Norwegian Fisheries off the coast of Svalbard, is sufficient coverage in the Russian and Norwegian media. According to the materials held in Norway later trials, many arrests have been deemed illegal. But the money spent on the courts, lawyers, arrests, port charges by our side no one appreciated and has not returned. Naturally, was lost fishing. The greatest public and the international attention received two cases detention of the trawler "Elektron" in 2005 and "Sapphire 2" in 2011.

"Electron" was the second ship in Murmansk, the Norwegian Coast Guard detained the Svalbard area. Earlier, the Norwegian side for failure information about the size of the catch be fined 500 thousand NOK Russian vessel "Blizzard." But his captain considered illegal Norwegians claim and refused to pay the fine. Captain of the "electronic" do not comply Norwegian Coast Guard to follow the Norwegian port and went into Russian waters, despite the efforts of Norwegian warships to prevent it. As a result of the international scandal erupted captain "electronic" appeared before the Russian courts, though not for the charges demanded by the Norwegian side.

September 28, 2011 Norwegian Coast Guard ship "Nordkapp" made the capture of the Russian fishing vessel "Sapphire-2" in the open waters of the Barents Sea on suspicion of discards overboard. This time, Moscow's reaction followed quickly. Russian Foreign Ministry statement, Ambassador of Norway in the protest to Moscow K. Hauge stressed that "the Norwegian actions were unacceptable and provocative. This is the sixth case of detention in recent Russian ships in the so-called "fishery conservation zone" Svalbard. This practice is contrary to the existing political arrangements to maintain favorable conditions for Russian fishing after the entry into force of the Russian-Norwegian Treaty on Maritime Delimitation and Cooperation in the Barents Sea and the Arctic Ocean. Disturbed and the Treaty of Paris in 1920¹⁹.

¹⁸ Agreement of the maritime delimitation between Norway and Russia in the Barents Sea, that will change the lives of not only the fishermen, but also of the entire region. URL: <http://www.fish-seafood.ru/news/detail.php?ID=35697>.

¹⁹ Захват «Сапфира-2» // Электронный журнал «Арктика и Север» / Арктические новости. 2.10.2011. URL: http://www.narfu.ru/aan/news.php?ELEMENT_ID=21354.

The head of the public relations of the center of Ros fishing A. Saveliev, referring to the White Sea-Berentsevo ter.management noted that surprise and some others claim of the Norwegian side. "There were cases where, for example, stated that the head of the fish were" not so "cut off ... <...> ... According to him, the total damage to the Russian fishermen of the Norwegian actions from 2008 to October 2011, exceeded 205 million rubles²⁰». At the 39th session of the SRNC in 2011, the Russian side raised the issue of the Russian fishery zone around Svalbard, expressing surprise at the Norwegian claims against our fishermen. What head of the Norwegian delegation said that the "question - not in the competence of SRNC, and should be resolved at the level of foreign ministers of the two countries"²¹.

So, clearly revealed the inconsistency of the problem of Russian and Norwegian legislation on rules of the fishing in the area of Spitsbergen square. As the head of the Barents and White Sea Territorial Administration of Ros. Fishing N. Balashov, "the problem of the international conflicts related to the detention of Russian fishing vessels by the Norwegian coast guard in the Svalbard area, will be addressed through changes in federal legislation"²².

But the vice-president of the Russian Association of the fishery enterprises, entrepreneurs and exporters (VARPE), chairman of the workers' fish farms V.K. Zilanov takes a different position: "Norwegians are based on the fact that they announced a 200-mile fisheries protection zone around Svalbard but they are well aware that the Russian Federation does not recognize that the 200-mile zone of Norway. Norway should therefore agree with Russia on these issues, and not apply the gendarmerie measures - to arrest and fine unilaterally. <...> We are fishermen, not against Norway to inspect our vessels. But if they found a violation, why is engaged in Norwegian court proceedings? Proceedings should be handled by the flag state - the Russian Federation. This area in the Barents Sea is open, and the status of the open area near Spitsbergen means that fishing operations are conducted in accordance with the UN Convention on the Law of the Sea, and only the flag State responsibility and take punitive measures against its ships. <...> Russia should just make it clear to Norwegians that we ourselves deal with the Russian courts and that Norway has

²⁰ The damage from the actions of the Russian fishermen of the Norwegian Coast Guard in 2008 exceeded 205 million rubles. URL: <http://fish.gov.ru/presscentre/news/Pages/%D0%BD%D0%BE%D0%B2%D0%BE%D1%81%D1%82%D1%8C007291.aspx>.

²¹ Agreement of the maritime delimitation between Norway and Russia in the Barents Sea will change the lives of not only the fishermen, but also the entire region. URL: <http://www.fish-seafood.ru/news/detail.php?ID=35697>.

²² Nikolai Vinnichenko. Connected to the solution of the problems of Svalbard. URL: <http://www.b-port.com/news/item/69614.html> (date of access: 23.10.2011).

no right to control the court in the area in the accordance with the international agreements".²³ This view is convincing.

In connection with the incident in the area of fisheries have been identified and the problem of the Russian military sailors to create and maintain conditions to ensure the safety of the marine economic activity of Russia in the Svalbard area. The participants of the meeting in December 2011 discussed the progress of their implementation of the Russian Navy. One of the retaliatory steps of Russia is to intensify the demonstration of Russian military flag in the Barents Sea: the presence of the Northern Fleet in the Arctic, including the Svalbard area, flying over the Arctic Ocean combat long-range aircraft. All of this is in the current environment tools to ensure the national interests of Russia. At the meeting of the government committee on the Russian presence on Svalbard in December 2011, V.A. Zubkov stressed the need to improve coordination of this work with other concerned agencies.

Thus, the problems of the Russian fishing zone Spitsbergen square not yet been resolved and remains one of the most painful aspects of the Russian-Norwegian relations. The actions of the Norwegian side have a clear tendency for increased efforts to oust Russian fishermen from this area.

Scientific research work. Among the alternative coal mining activities of the Russians on Spizbergen is one of the main development researches. Back in 2008, at the archipelago were 10 research institutions. There is a huge reservoir of problems which need to conduct the scientific research in the Arctic. Spizbergen - is the perfect training ground for many of them. Russian scientists, Russian research teams are involved in the research in Pezbergen, Norway held the international organizations. A study by our forces are developing very slowly, - the G.D. Oleynik²⁴.

For the development of the scientific research in the archipelago developed a multifaceted program. In 2008, the construction began on the Russian Research Centre in Svalbard, the operation of which is expected in 2012. An integral part of such a program would be to create a branch in Svalbard Polar Research Institute of Fisheries and Oceanography (PINRO). For this research center is planned to modernize existing in the archipelago of the Russian scientific town. Planned not only to develop geophysical, hydrological and geological projects, but also to build a receiving station for satellite data, scientific conferences. Justification of the project entrusted to the Federal Agency for Fishery. But the execution of this work is often hampered by the fact that requires constant coordination with the Norwegian authorities Svalbard actions of Russian scientists.

²³ How to arrange the relations of Russia and Norway in the sea. The point of the view of Vyacheslav Zilanov. URL: <http://www.b-port.com/analytics/item/69000.html> (date of access: 11.10.1011).

²⁴ Oleinik G.D. The same place.

For example, a lot of obstacles arise in the archipelago at the Russian archaeologists. They are actively finding the 60 years of the twentieth century. Many of their findings convincingly demonstrate the constant presence of coast-dwellers in the archipelago, at least, from the XVI century, when permanent settlements of other countries did not exist. In digest "Svalbardposten" (Norwegian newspaper, which is published in Svalbard) says of the problems of Russian archaeologists: "Russian scientists from the Institute of Archaeology RAS appeal the decision to the governor, according to which they are forbidden to carry out excavations on the site of the Pomeranian Bettibukta settlements in the south of Spitsbergen. <...> ... In the Pomeranian towns are located residential building, two of the cross, burial, and the design of unknown destination.²⁵ "Restrictions archaeological Norwegian party explains the need to protect nature from human impact on Svalbard, in connection with which the vast expanses of the archipelago in the 60-70's have been declared nature reserves and the national parks.

Thus, the scientific activities of the Russians under constant restrictions imposed by the Norwegian authorities.

Tourism. Development of the polar tourism has become one of the main levers by which the Norwegians were able to provide lift Svalbard and turn it into a thriving administrative Longyearbyen village. The already-mentioned round table in the Federation Council Committee on Foreign Affairs noted that in Norway showed us brochures on Svalbard - quite modern tourist industry. And it's all set up in a short time. Why are we discussing the problem for years, despite the fact that there are large local travel companies, including state-backed? Probably, and here it was possible to apply public-private partnership (G.D.Oleynik). Assistant to the Minister of Economic Development and Trade Minister Morgunov in 2010, pointed out: "Do not use the possibility of the development of tourism on the basis of settlements of Barentsburg and Pyramid though recreational opportunities Svalbard is very well known in the world. <...> In terms of the tourism business, then, should the law on tourism and recreational areas, may be considered appropriate to grant the status of the territory. Russian infrastructure on Svalbard is, even a swimming pool with heated ocean water"²⁶.

One of the touristic attractions can become the preserved Russian mine «Pyramid». This is the most northern settlement in the world, attracts a large number of travelers. There are a lot of other attractions with objects labeled "the most northern in the world": a monument to Lenin, Palace of Culture. Attempts to restore the building pyramids and revive him alive through the

²⁵ Excavations // Svalbardposten. 2011 (july-august). № 25–33. p. 16.

²⁶ The status of the touristic SEZ can be given to Shpizbergen. URL: <http://www.gzt.ru/topnews/tourism/74626.htm> (date of access: 26.05.2010).

tourism undertaken jointly by Russian and Norwegian side. But there is several problems. The newspaper "Russian Reporter" in his essay "Archipelago could not" in the opinion graduate of the graduate student of Petersburg of A. Astrakhantseva is written, that problems hinder the development of Russian tourism in Spitsbergen gene: "Now in the Pyramid Arktikugol set three good cabins for tourists. And they already have problems with licensing. You can imagine what will happen to the hotel that there will soon be repaired. Norwegians unprofitable, so that tourists spent the night with us: they want every night they came back to Longyearbyen. Their bureaucracy while masterfully handles in order to keep Russia on the periphery of the tourist business. What it opposes Russia? It's nothing. Suffering to the last, then wag his fist in the air and again suffers"²⁷.

In addition, to Barentsburg went a great stream of the tourists, it is important to reconstruct berths. Now the Russian ports on Svalbard can not take the large passenger liners because of their high rainfall. Who will be able to fund these large-scale works - is not clear.

Link. Russians are making the great efforts to develop Spizbergen as the modern communication systems, including the use of the space satellites. But Norway's position on these efforts thinks with suspicion. One of these examples is the story of the Russian project of the creating a complex satellite reception in Barentsburg. Communications infrastructure of the construction in Spitsbergen provides the subprogram "Development and the use of the Arctic" Federal Program "World Ocean", approved by the Minister on 10 August 1998 № 919. Government customer facility is Rossvyaz. The purpose of construction of these facilities - Barentsburg provision of the modern communication services (telephone (fixed and mobile), broadband access to the Internet, ensuring the translation of at least six nationwide broadcast channels and three radio stations nationwide). Network availability planned for 2011.

The customer of the complex communication satellite network of Barentsburg was Arktikugol, performer - SE "Satellite Communications". In addition to the climatic conditions, the main complicating factor is that the Barentsburg is a guaranteed service area of the satellite. This required special installation conditions of the earth station. Installation of the station was made in the summer of 2002, as the space segment of the satellite was supposed to use the "Express-A1R." August 15, 2002, when the satellite was put into service at the orbital position 40 ° east longitude, the station was installed, provided access to the Internet. Was sold two jobs on the project "CyberPocht" - two personal computers installed in public places: one in the hotel, the second - in point of collective use, combined with a negotiating point. For shipping and printing of fresh issues

²⁷ Sokolov-Mitrich. Archipelago is not possible. URL: <http://rusrep.ru/2009/40/shpicbergen/>.

of newspapers was set print station, on-line Newspaper Direct. In Barentsburg was possible to obtain the majority of Russian and foreign periodicals²⁸.

However, later the situation became more complicated. In 2008, a survey of the state of the telecommunications infrastructure in Barentsburg was held. The report of the Federal Communications Agency noted that the population is able to take only three federal television programs, federal radio are not accepted; there is no service on the access to the Internet. Telephone network is overloaded. Long-distance and international calls are only possible point in the negotiations with the console. In order to provide the population of the village of Barentsburg with the modern communication services was developed a complex on Svalbard. FSUE "Satellite Communications" and FSUE GSPI RTV started the development of the design estimates for the activity "Construction of the infrastructure due to the Spitsbergen archipelago." In November 2008, the Federal State Unitary Enterprise "Russian Satellite Communications" and FSUE "GT" Arktikugol "agreed and approved the technical requirements for the design of this facility"²⁹.

At the end of 2011 in the Arctic and Antarctic Research Institute (AARI) began the organization of the point of the remote control of the complex receiving stations on Svalbard and of the thematic data. Completion of the work on the creating subsystem planned satellite observations in 2012. According Rossvyaz, "under the state contract entered through an open auction in the electronic form, in 2011, the construction of:

- The line of a binding (FOCL) Uplink - the center control and management (plot mountain of Olaf - the settlement of Barentsburg, extent of 1.6 km);
- Exterior electric networks 0.4 Sq on a plot mountain of Olaf - the settlement of Barentsburg (stretch of 1.9 km);
- Arrangement of the premises (hardware) and the reconstruction of the systems related to the engineering of infrastructure, manageable operation, Uplink basic references and station of cellular connection»³⁰.

Input in the exploitation of the infrastructure in Barentsburg with the parameters set design documents, in 2013. But in 2011, the Norwegian authorities have demanded to demolish the Russian complex erected satellite dishes. Svalbard authorities claim that the Russians "did not receive permission to build them." Russia's attempts to find a compromise solution have not been successful. As a result, the question, "hung in the air." This is reminiscent of the 30s, when the

²⁸ Kolyubakin V. Integrated satellite communication GP the COP in Barentsburg (Spitsbergen) / / Tele-Sputnik. 2003. Number 7. URL: <http://www.telesputnik.ru/archive/93/article/34.html>.

²⁹ Annual report for the the year 2008. URL: <http://www.rossvyaz.ru/docs/report2008.htm>.

³⁰ On Spitsbergen is finished the work on the creation the communication infrastructure, the planned for 2011. URL: <http://www.rossvyaz.ru/press/news/news758.htm>.

Norwegian authorities actively protested against the construction of the archipelago Soviet radio, which, in their opinion, interfere with the work of the Norwegian radio operators³¹.

Thus, implementation of the Russians works in the field of the development communication systems authorities on Svalbard authorities under the pretext of the precision of Norwegian law.

To sum up, we note that the main directions of the development of the Russian presence on Svalbard defined in 90 years of the twentieth century, but the realization of them Russian authorities for a long time actually did not start, and many of the decisions were carried out formally and did not give the desired result. In this case, the desire is clearly seen by the Norwegian counteract increased economic activity Russians on Svalbard and the adjacent waters. The main excuse for this is to protect the environment. There's no denying that the nature of Svalbard is very vulnerable and we must carefully keep this economic activity. But, as noted by GD Oleinik, "we can not but worry that now much stronger (or used as a provocative) the role of environmental factors in the emergence of modern conflict."³².

As emphasized in December 2011, the meeting of the Government Commission to ensure the Russian presence on Svalbard, the implementation of the strategy should provide better quality of life, social security protection and safety of workers, the economy and life support systems, providing the citizens of Russia Svalbard air transport, modern medical care and quality telephone connection. Outcome of the meeting give reason to believe that the Russian government in the near future, from declaring and design will go to the practical implementation of the plans, and that Russia will maintain and strengthen its presence in this strategically important for the entire region of the Western Arctic.

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³² Oleinik G.D. The questions of the legislative support of the Russian's interests in the Arctic region in the context of world politics / / Problems of the North and the Arctic: Scientific newsletter. 2007. No. 7. p. 8.

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Museums and ethno tourism in the promoting the ethno culture of the Arctic inhabitants in the social space of the North: to the problem through the research experience of Mordovia Diaspora in Siberia and the central part of Russia¹

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Abstract

A major part of the museum as a center of preservation of ethnic cultures of the peoples of Russia belongs in ethno tourism. During the expeditions to the Permskiy region, Vladimir and Moscow regions, we studied them in order to collect materials about Mordovians. According to the 2002 census, the number of Mordovians in the Arkhangelsk region was 944 persons in the Murmansk region – was 2 479 people. We hope that together with ethnographers' educational institutions and museums of the northern region, we can begin to study the Mordovian diaspora in the social space of the Arctic and North.

Keywords: *ethno tourism, museums, social space, Arctic, North Mordovians, Diasporas, Siberia, and Central Russia.*

Human society, becoming more interconnected and unified, shall not lose its of cultural diversity. In the context of the modern tendencies of the public development are extremely important to consider the cultural peculiarities of people, to understand each other and to achieve the mutual recognition of [14, p. 7]. If we proceed from addition, that the ethnic socium repre-

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sents a unity of stable of ethnic of constant of components and of variative parameters, then we explore his follows mutatis principle of unity of the constancy and variability of the existence of the ethnos [39, p. 7].

At present, all the increasing distribution is received the ideas of the multicultural education [17], during which fundamental principles are: the principle of dialogue and interaction of cultures; the principle of creative expediency of consumption, preservation and creation of new cultural of values. Education, on the one part, must increase consciousness of by man of his of roots and definition of the place, which he takes in the world, with another - to instill him the respect of other cultures.. Study of culture has Neighboring people, who should promote the formation of feelings of equality, dignity, of moral culture of interethnic relations, ensure the cultural dialogue of representatives of the various nationalities [10, 18]. In such a way, multicultural education – is an important part of the modern education, which contribute to: the assimilation of by students of knowledge about culture, the traditions, the way of life, spiritual values of other people; education of youth in spirit of the respect to international cultural systems and boosted with ethnic identity of the future generation.

Due to the interaction of the local and of the ethnic cultures arises a system of communion, and supported the different styles and types of behavior, value orientation, is saved and give their ethnic originality. Such communication proceeds through the mutual adaptation of the and understanding of the cultural uniqueness of neighbors [14, p. 21].

Tourism is one of the leading and the most dynamic sectors of the economy, and for rapid economic phenomenon it recognized through centuries. [39] In the development and preparation of entertainment and programs typically take into account national peculiarities of culture and traditions of the host region. In this connection it is necessary to promote the development of ethno-tourism as a factor of the identity of many ethnic groups, and this plays a major part of the museum as a center promoting the preservation, study and promotion of monuments of Natural History, material and spiritual culture of the peoples of Russia

The main directions of the School № 19, Saransk, RM and its director, PhD Z.I. Akimova:3.:

- ✚ The educational activities on ethno-cultural education Finno-Ugric and other people of the Volga region and the Republic of Moldova;
- ✚ The study of the traditional materials and spiritual culture Mordvin people living on the territory of the Republic of Moldova and abroad.

The high school held regional, national conference themes: "Ethno-cultural education: experience and perspectives", "Living culture: tradition and modernity", and are round tables, seminars, workshops on intercultural communication, dialogue of cultures of people living in Mordovia, and other regions of Russia. Special attention is paid on traditional culture

Mordovians, study of the Finno-Ugric languages (Mordovia (Moksha, Erzya), Finnish), Mordovia literature, traditions and customs of the people of Mordovia. ZI Akimov - the author of many publications in this area [2, 3, 4, 5].

The State Governmental institution RM "Research Institute of Humanities at the Government of the Republic of Mordovia" has enormous experience in the research (it is already 80 years old). Close attention is paid to the study of ethnic culture of the people living in the country (according to the official statistics in 2002, the people in the country live in 92 nations), migration processes, and expeditions to study Mordovian diaspora in Russia, etc. The expedition across Russia - from the east to the west. For example, since 2001, organized and conducted ethnographic research expedition (under the guidance and direct participation of the doctors used toric, Professor LI Nikonova) in more than 25 regions of Russia and in more than 200 settlements of the Russian Federation - the places of the compact residence Mordovia Diaspora (Khabarovsk and Primorsky Krai, Irkutsk, Sakhalin and Kamchatka region (2001-2005), Magadan, Amur regions and the Republic of Sakha (Yakutia) (2001-2011), Sverdlovsk, Chelyabinsk and Kurgan region (2010-2011), Central Russia (the city of Vladimir, Moore, Suzdal, Moscow and Moscow region (2011-2012)), etc. The results of these expeditions have opened a new series of monographs "Mordva Russia" [18, 19, 20, 21, 22]. This series is unique in received the new fundamental scientific data and allows for generations of scientists. Issued and approved by the expedition questionnaires, surveys [26, 27, 33], and other materials are the teaching aids for the expeditions by Russian scientists, teachers, schools, universities, engaged ethnography and ethnology. At the Research Institute for the Government of the RM a science school, which focuses on the migration and ethno-cultural adaptation of people in different ethnic environments, and published an impressive fundamental scientific works that reveal the role of culture to differences in the adaptation of migrants [25, 28, 29, 31, 32]. printing volume collective monograph "Ethnic and cultural world of the Republic of Mordovia: historical and ethnographic research, research," which was first recorded culture of people living in the country: Russian, Mordovians, Tatars, Ukrainians, Chuvash, Uzbeks Kazakhs, Azeris, Georgians, Armenians, and others.

During the ethnographic expeditions to Perm, Vladimir region, Moscow and Moscow region, we tried to visit the various museums to collect the ethnographic materials and to identify the role of museums in the ethno-cultural education, the study of the traditional culture of the ethnic groups, in particular Mordovian diaspora living in the study area. To this end, we studied the materials stored in the museums on the history of the migration, migrants, statistics, artifacts on the materials and spiritual culture, etc. Here is some information in this direction.

The expedition found that Mordovian population moved to the region of the modern districts of Moldova. Thus, in the city Krasnokamsk Mordovians moved from villages Mordovian Syresi, Durk and Chelpanov Atyashevsky district RM; to the village Nikitino- from the villages Kuchenyaevo and Chukaly Ardatov district of the republic, in the village Busyryata - from the village of the district Piksyasi Ardatov RM and the village Durk Atyashevsky RM district, in Bragino village - from villages Durk, Alov Atyashevsky RM district and village Kelvyadni Ardatov district of Mordovia. Mordovia immigrants settled in the area before the war Krasnokamsky (since 1939) and the post-war years, due to crop failures and food shortages. The survey population was revealed that relocation was voluntary. The characteristic features were that Mordovians resettle several families. The diversity of the natural environment, ease of water and land routes has always attracted people to the Urals, whose descendants still live here today. Paved roads through the Urals were actively used for the migration to the European territory in Siberia. Different landscape zones have an impact on the settlement patterns and the ethnic processes [40, p. 123].

Permskiy region or, as it is called, Permskoe Prikamie - the region, which is unique in ethno-cultural terms. Throughout history, it was formed as the multiethnic, his mastering of different origin, language, economic, traditions people, resulting in a form one of the most interesting ethnic and cultural complexes that do not have direct counterparts in other regions of Russia. In this case, inter-ethnic relations in the region have always been peaceful [41, p. 3]. The causes of migration were set. For example, in 1920 in connection with the famine in the Volga region has been a massive migration in the Perm region, dispossession and repression of the 1930s led to the displacement in the Kama, Kama for the industrial construction in the 1950s and 1980s were traveling from all over the Soviet Union. Therefore, in the Perm region are living almost all people of Russia [41, p. 4].

According to the census in the Permskiy region is home to over 120 nationalities [23, p. 3]. Number of Mordovian population of Permskiy region during the inter-censal period decreased significantly, which is caused by the action of three factors: the natural movement of the population, in the processes of out-migration, shaped by the collapse of the USSR, the process of the changing ethnic identity under the influence of the mixed marriages and other events [23, p. 4]. The city of Permskiy region Krasnokamsk and subordinate settlements According the National Census 1979, there were 389 people Mordovians (0.5% of the total population), in region 1989 - 305 people (0.4% of total population) in 2002 - 217 persons (0.3% of the total population), including 107 males and 110 - female [23, p. 51].

During the expedition, as already noted, the collection of the material is not only from informants, but also in regional and rural museums, libraries, and schools. The city is working Krasnokamsk municipal cultural institution "Perm Museum", which serves all the people and the visitors of the region. [7] Its collection contains materials documenting the history of the region, the first days of life of persons. Exhibits of the material culture: shoes, clothes, utensils, tools, items from the interior of the home, including bags and dishes arrived settlers and other artifacts [7], and the bags, mock dwellings settlers posters, slogans of the time, a record player, the first pulp and paper mills of Krasnokamskiy, employing settlers, including attributes of the plant, etc. All these settlers, and now the old residents of the village, themselves brought to the museum, told about his life or the lives of their recovered memories of their parents, shared history museum recreating OB Kurochkin (now the acting director of the municipal cultural institutions "Perm Museum" city Krasnokamska) [16]. "We often come to school and we are happy to tell them about our wonderful region", - said N. Boyko (now a senior researcher at the museum). [9]

According to the census of 2002, the total number of Mordovians Vladimir region of 3570 people, most of them live in urban areas (cities of Vladimir, Suzdal, Moore), and the rest live in rural areas (Suzdolsky, Murom, Sudogda areas). Turning to the issue of settlement Mordovians the Vladimir region, the bulk came for permanent residence from 1960 to 1980. The main reason for moving to the economic, respondents said, "for a better life", it is in these years in recession in Mordovia. Vladimir region, thanks to its geographical location and economic climate was more attractive to life. Especially in the late 60's saw the beginning of the industrial resurgence of Vladimir region: to build plants, requires labor, and hardworking Mordovians, going for a "better life." In factories Mordovians provide not only jobs, but also office accommodation, that is advancing a "better life", they were dreaming of.

From September 25 up to October 4, 2011 the ethnographic expedition to the Vladimir region to study Mordovian diaspora. Members of the expedition: Professor, Doctor of Historical Sciences, Senior Research Fellow, Head of the Department of Ethnography of the state fiscal institutions in the Republic of Mordovia "Scientific Research Institute of Humanities at the Government of the Republic of Mordovia" L.I. Nikonov (the expedition leader), Ph.D., Senior Researcher T. Aksenov, a senior fellow T.N. Okhotin, Junior Researcher M. Fadeev and graduate department of the ethnography and the ethnology E.G. Chibiryov. Vladimir region were examined 4 areas (Sudogda, Suzdal, Sobinsky, Petushki) and in which 12 settlements, and 4 cities (Vladimir, Gus Crystal, Moore, Suzdal). It was found out that the geography of the Vladimir region is as follows: in the area of the village Sudogda New Polhovo Mordovians left the village of Forest Ardasheva

Tengushevskogo area; Tyurmerovka the village - the village Ezhovka Kovylnskogo district, in the village Burlygino - from rural New Pichemorga and Malyshevo Torbeevskogo district, in the village tours - from the village of New Pichemorga Torbeevskogo district, in Suzdal district: the city of Suzdal - the village ovens Lukoyanovskoye district of Nizhny Novgorod region and the village Shoksha Tengushevskogo area; Kutukovo the village - the village Shoksha Tengushevskogo Insar areas and, in the village of Novo-Alexandrova - from village Shiromasovo Tengushevskogo area; Snovitsy the village - the village Shiromasovo Tengushevskogo district and village Shoksha Tengushevskogo area; Suromna the village - the village Povodimovo Dubensky district, in Sobinsky district: Babaevo the village - the village Sakaeva Tengushevskogo area; Petushki in the region: in the village of Golovin - from the village Ezhovka Kovylnskogo district and village old Akshin Staroshaygovskogo area; Volginsky the village - the village Andreyevka Bolsheignatovskogo district, in the city of Vladimir - Zhabina from the village (now town INEL) Ichalkovsky area, in district Energetic - from village Duhonkino Atyurevskogo area villages Kurtashki and Atyurevo Atyurevskogo district, village Sakaevsky Tengushevskogo Maidan district, village Varmazeyka Bolsheignatovskogo district, village Turdakov Ardatov area villages Kolopino and muzzle. Parks Krasnoslobodsky district, in the city of Goose Crystal - from the village Shoksha Tengushevskogo district, in the city Moore - from the village Tashkino Ichalkovsky district.

During the expedition to the Vladimir region, we visited several museums, including Golovinskaya village library, a branch in the village of Golovin Petushki district. Her head Solomaykina M.I. [37] gladly told us about the museum at the library. The museum occupies two rooms. We were struck by a large number of the exhibits. Here is a utensil, embroidery, appliqué threads, fabrics, tools, construction interior of the home, keys, irons, boxes, scales and weights, spinning wheel, etc. In addition, here are decorated stands; where visual and reading are documentary evidence history of the village of Golovin, information about the school, the House of Culture, the photos "from the old album" as well as for school crafts, awards and team members of the school community, the museum. [6]

In the village of Novo-Alexandrovsk Suzdal, Vladimir region museum is open in the school, the correct name is "The School of the New Alexander settlement of the Suzdal region." The museum is open through the school community, but it is particularly difficult to put director I. Grigorenko, a history teacher, school librarian School G.V. Mizireva, [13, 17], a math teacher and head of the school museum MOU New Alexander main secondary school V.M. Gavrilov [11]. The museum is located on the second floor of the building has one room, where one part of it is an ethnographic exhibits and interior peasant house (embroidery, crochet tablecloth - decorated

front corner of a village house), items (jersey, shushpan, footwear, including shoes, pots, irons, rocker and tongs, towel, outrigger laundry, etc.), the stove, and the other - a collection of documents from the history of villages, churches, schools, and other miscellaneous information from printed and manuscript sources. [6]

In the city of Vladimir N. Balkin – is the Chairman of the Vladimir regional organization of the Finno-Ugric people "Kideksha", the initiative of which are the migrants from Mordovia. He is also the director of MOU "Secondary school № 44" city of Vladimir. [8] The school operates a school library. Until just a few years it was the head of the school library Telyatnikova T.N. [38]. In the library creates the exhibitions about the literature, about the life and the culture of this region Mordovians and living in Moldova, has a variety of the books, prints and publications, newspapers and magazines. All this, according to Tamara is an educational moment in the life of each student. For the love of popular culture does not disappear, but on the contrary, more recently developed, so more schools began to open a small museum, is collecting books on popular culture, held debates, roundtables, and exhibitions. For example, we have more than a month the exhibition "Native land": the children read their poems, voiced history of the village, and are a selection of books from home libraries, and so on. [38]

The ethnic difference (one of the basic concepts of the historical ethnology) is the difference of the cultures, as the main mechanism by which human communities to adapt to the environment. The ethnic processes inherently adaptive, and this approach is acceptable to the diaspora in Mordovia, Moscow region, so far not had the scrutiny of scientists.

According to the census of 2002, Mordovians in the municipalities of the Moscow region, the number: in the Dmitrov - 786, in Dolgoprudny - 148 in Domodedovo metro area - 324, in Egorievsk metro area - 198, in the Railway metro area - 262, in Kashira municipal -dimensional area - 265, Klimovsk - 83, Klimovsk metro area - 512, in Kolomenskoye metro area - 430, in Kolomna - 504 in Kotelnik - 56, in Krasnoarmeysk - 27, Lobnya - 126, Lotoshinsky metro area - 134, Lukhovitsky metro area - 903, in the Naro-Fominsk metro area - 624 in Ozersk metro area - 408, in Pavlovsky Posad municipal area - 124, in Serpukhov - 191, in Solnechnogorsk metro area - 780, in the municipal area Taldom - 301, in Troitsk - 64 in Khimki - 331 Chernogolovka - 24, in the Chekhov metro area - 743, in Shatura metro area - 174, in the metro area Shchelkovo - 380 Scherbinka - 26, Elektrogorsk - 61, electric steel - 239, the Jubilee - 53. From these data we can say that of the 72 municipalities in 32 Mordovians listed municipalities, and in some of them it a lot: for example, in the Dmitrov - 786 in Domodedovo metro area - 324, in Egorievsk metro area - 198, Railway in the metro area - 262, in Kashira metro area - 265, Klimovsk metro area - 512, in Kolomenskoye metro

area - 430, in Kolomna - 504, in Lukhovitsky metro area - 903, in the Naro-Fominsk metro area - 624, in Ozersky metro area - 408, in Solnechnogorsk metro area - 780 in Taldom metro area - 301 in Khimki - 331, in Chekhov's metro area - 743 in Shchelkovo metro area - 380, in Elektrostal - 239 [30, c. 139-147]. Therefore, in March 2012, Professor, PhD, chief scientific officer, head of the department of ethnography of state fiscal institutions RM "Research Institute of Humanities at the Government of the Republic of Mordovia" LI Nikonova (expedition leader), Ph.D. , Senior Fellow TV Aksenova, senior fellow TN Okhotin, a research assistant M.M. Fadeeva ethnographic expedition was made in Moscow and the Moscow region. During the ethnographic expedition found that Mordovians this region has a lot of author museums are rich collections of clothing, utensils, written information (documents, manuscripts and printed sources, etc.), photographs, etc. The family Kuvezenkovykh, Chumbaevykh, and Bukin others have more than 30 sets of traditional clothing, utensils, and more than 20 others. [44] Their children are happy to come out with repertory on school holidays in Moscow, as well as on television, public celebrations in Moscow. Mordovians Moscow and Moscow region distinguishes cohesion, a wide variety of creative teams, participation in public events (Day Mordovian streets in Moscow, the Conference of Inter-regional public organization "Mordovia fraternity", etc.). Copyright museums have great educational value for the younger generation, including the strengthening of love to the past of their ancestors, and as a whole - the patriotic upbringing of their homeland.

According to the national census, held on 14 October 2010, the resident population of the Arkhangelsk region, including the Nenets Autonomous District, was 1, 227,626 people among them Russian -95,6%, Ukrainians -1,4%, Nenets - 0.6%, Belarusians - 0.5%, Komi - 0.4%, Tatars - 0.2%, other nationalities - 1.3% [34]. According to the census of 2002, Mordovians in the Arkhangelsk region there were 944 people in Murmansk - 2479 people [24].

Because of its border position Murmansk region is ethno-contact zone. Besides the population is under the influence of the intense migration, was formed as a multi-ethnic. In the region, there is considerable experience with respect to long-term conflict-free coexistence of the various ethnic groups, due to the peculiarities of the process of the development and the settlements of the region, a high percentage of the migrants and urban, multiethnic, etc.

The Murmansk region is the home to more than 120 ethnic groups (2002 data). The main share of the population was made up of Russian and - 85.2%, Ukrainians and Belarusians - 6.4 and 2.3%, respectively. By Sami are indigenous to old - Russian coast-dwellers, to later - Izhemsky Committees, as well as geographical dispersion representatives of other ethnic and cultural groups. According to the census of 2002, in the Murmansk region Mordovians numbers - 2.5.

Thousand people. [42] However Mordovian population of Arkhangelsk, Murmansk and the whole of the northern regions have not been studied, so we hope that together with ethnographers educational institutions and museums, we can begin the work.

At the present time, there are over 12 thousand museums [43], if we start from the definition of the museum - (from the Greek. - Temple of the Muses), a research or the scientific educational institution, which shall, storage, study and the monuments of the natural history, material or spiritual culture, it is safe to point out that museums will assist in the promotion of the ethnic culture of the people of the social space of the Arctic and the North. We, ethnographers of Moldova, through experience Mordovian diaspora studies in Siberia and Central Russia will seek to organize research Mordovians living in this region. For a particular culture of the Ethno can act as a factor of the identity of the numerous ethnic groups, which plays an important role in this museum as one of the centers that promote the preservation, study and promotion of monuments of Natural History, material and spiritual culture of the people of Russia..

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Russian old-settlers Yakutia: culture and landscape¹



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Abstract

Of the example of the areal groups of Russian old-settlers (russkoustyintsy, pokhodchane, the Amga, the Lena and the Olyekma peasants) have been reconstructed the basic socio-economic parameters, has been highlighted the traditional image of the rural cultural landscape of Yakutia. Formation a culture of life-support Russian old-settlers in the region is seen as the result of the multivariate combination of natural and cultural complex in the peripheral area of the continuum.

Keywords: *landscape, ethnos, culture, the system of life supplies, nature-usage, outlook, Russian old-settlers, Yakutia.*

History of the Russian population has always been one of the key themes of the historiography of Yakutia. Considering the challenges of the accession to the edge of Russia, its socio-economic and cultural development, interethnic contact, the researchers could not ignore the history of the formation and the ethno-cultural development of the Russian population, the largest region of Siberia. Even before the Revolution, travelers and scholars have noted the peculiarity of the Russian people in the Far North. Mention of the Russian inhabitants of Yakutia we find in the works of S. Krasheninnikov, F. Wrangel, A. Middendorf, H. Shchukin and others. In more details the Russian old-timers of Yakutia are described in the research of A.P. Schapova [24], which, considering the questions of the influence on Russian population of the indigenous people of Siberia, concluded the transformation of the Russian nationality in the Yakut-Russian. At the end of XIX century published works of VI Jochelson [9] FJ Cohn [11], MS Vrutsevicha [3] raise the issue of ethnic and cultural development of the Russian population of Yakutia.

Prominent place in the study of pre-revolutionary history of the Russian population of Yakutia owned Maynovu II [12-14]. In his studies, he described the vast factual material economy, daily life, social relations and culture of the Russian peasantry, the first scientifically formulated and attempted to solve the problem of metisnom (mixed) Russian-Yakut and Russian-Tungus pop-

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ulation. Despite some shortcomings, is to idealize the peasant community and the desire to diminish the development of the capitalist relations in the peasant community, his works are still a valuable resource in addressing the various issues of the peasant way of life and the history of the Russian population of Yakutia in the general.

Prerevolutionary history of the Russian population of the north-east Asia and a number of works devoted to the Soviet historians. In the papers by G. Safronov [18-20, etc.], G.P. Basharina [1-2], V.N. Ivanov [5-6], A.A. Izbekovoy [8] detailed the process of the formation Russian old people, their economic activities and inter-ethnic contacts in the economic, social, political and cultural spheres. Modern researchers V.B. Ignatiev [7] I. Romanov [16-17], T. Petrova [15] E.A. Strogova [21] first tried to identify the demographic characteristics and the main trends of the development of Russian ethno-cultural old-timers in the early stages of their existence in a regional society of Yakutia, and in the latest period. In the ethnographical Russian population of Yakutia little studied, except for a series was reprinted historical and the ethnographic essays A.G. Chikacheva devoted to old residents of the Arctic region [22].

So, for nearly four centuries that have passed after the Lena region into Russia, Yakutia has developed a permanent Russian population, which most foreign and domestic researchers categorized old resident. It should be emphasized that Russian is not a carrier of one local culture. They moved to Yakutia in different periods, with different goals, settled in different natural and climatic and socio-economic conditions of the ground, themselves came from different social classes and regions. All this has left a definite imprint on their lives and led to the creation of groups in Yakutia old resident population is significantly different from each other. Such a group of Russian old-timers like Prilenskoye peasants, Cossacks, burgers Indigirka and Kolyma, characterized by varying degrees of changes in the economic and cultural type, perceptions of local traditions, different degrees of adaptation or loss of their language and cultural traits of maternal ethnicity. The role of these groups in different periods of the history of Yakutia was not the same.

Annexation of Siberia and the rapid advancement of the Cossack troops to the east, explained the started in XVII century the Russian colonization of the vast territory of the north-east Asia. Moving a "meeting the sun", the Russian built forts, and winter hut homestead. By the end of XVII - the beginning of XVIII century on the territory of Yakutia have two centers of the complex living Russian. First - South - was in the taiga zone and covers the coast from the town of Lena River Vitim (the border with the Irkutsk region) to the city of Yakutsk and the settlements on the river Amge, as well as resulting in the end of XVIII century settlement on the river Mae. This zone tend-

ed and Russian settlements on Vilyuy. Second - north - situated in the tundra and included the towns in the lower reaches of the Kolyma River, Indigirka, Yana, Lena and Olga.

In general, the complex cultural and geographical characteristics of Yakutia was similar to the Russian North and the following parameters (by VN Kalutskovu): remoteness, marginal status, lack of landlordism, the serfdom of extreme weather conditions, a close relationship with the nature of the economic cycle; comprehensive type of economy; polyethnicity regional society, the spread of bilingualism (mostly Russian-Yakut), says (indigirschina, pohodsky, etc.) [10, p. 169-172].

However, the natural landscape features of the each zone to determine the difference of the economic-cultural types and models of the adaptation to the extreme environments of the Russian region.

The basis of the economy of the Russian peasants of the central and the western Yakutia, descendants settled on the land and the serving industrial people and planted on the land of exiles, which merged the drivers actually relocated from Siberia and Central Russia for the device in the middle of the XVIII century, Irkutsk, Yakutsk post road (this is possible attributed Yakut Cossacks), was farming - arable farming and horticulture. Land, in the contrast to other regions of Siberia, where a longer summer permitted a triple plowing plowed twice - in the spring and fall, in the late August - early September. Usually seed produced in May, and the harvest begins in August and lasts until mid-September. While yields were at the national average - 15-25 centers per hectare. These yields are the result of the almost three hundred year of the effort of the peasants Vitim-Lena agricultural area produce specific farming techniques in the permafrost. Farmers acclimated significant amount of the grain and vegetable crops, brought its own wheat variety Teremok, were popular in the Eastern Siberia. Threshing usually begins with the onset of the severe cold (at the end of January-February). Current is arranged on the frozen lake, river, or in the yard, long and frequent watering selection area with water to form a thick and smooth ice, replaces the characteristic central Russia and compacted clay smeared current [21, p. 540-541, 546-547]. Great importance in the Russian peasant farms also had livestock: the old-timers keep cows and horses, in the southern districts - sheep, pigs and some chickens. Substantial support from the hunting and fishing. Livestock equipment borrowed from the Russian natives - Yakut descendants migrated for centuries before them Turkic-Mongol tribes, who were able to adapt to the conditions of the Far North pastoral economy [19, p. 376]. However, the Russian brought into these industries some advanced tools and crafts (spit-Lithuanian, networks, guns, etc.), types of farm buildings, vehicles (assuming that the Yakuts and Evenki borrowed from Russian sledges, before that they moved exclusively top). In a more severe climatic conditions were significantly modify

traditional dwelling, clothing, food, utensils, Russian immigrants. It is in these areas occurred most significant ethno-cultural borrowing from the local Aborigines.

In the ethno-contact areas - settlements Amginskih, suntarskih OLYEKMINSKY "Pashennykh" peasants, the areas adjacent to the Irkutsk-Yakutsk post road - there is intense assimilation and the acculturation processes. That is when there is a cultural phenomenon "obyakuchivaniya" local Russian population. Despite the fact that Russian and Yakut population initially were significant differences in the economic and cultural type, language, way of life and culture, few settlers, their distance and total isolation from his homeland led to the fact that for them very quickly became dominant due to the local population. In areas where employment in agriculture has ceased to have ethno-differentative character, such as a settlement and AMGA Vil-yui due to replication of economic-cultural type of indigenous people, language and spiritual culture of the Yakuts, changing under the influence of regular physical type of mixed marriages, for the second half of the XIX century, the local Russian began to identify themselves as Yakutia. Sustainable national identity despite bilingualism, and sometimes even a full transition to the Yakut language, continues to keep up to date Russian old-timers Lena region, managed to retain the traditional occupation - agriculture, due to the constant influx of voluntary and involuntary immigrants from Central Russia.

Other processes occurred in the north of Yakutia. In the Arctic zone at Russian veteran has developed a comprehensive commercial farming, the main components of which were fishing, polar fox hunting, mining seals, hunting wild reindeer and lenuyu game. Later, as a latrine fishing-spread production of ivory. Originally this area of residence of Russian old-timers cover the lower reaches of the Lena River in Yakutia, Olga, Yana, Indigirka and Kolyma. Settled here, mainly industrialists and tradesmen - people from the Russian North: Usty -uzhane, Usoltsev Mezentsev holmogortsy, pinezhane and others [22, p. 10]. To date, the steady Russian identity and ethno-cultural identity of the inhabitants kept only Indigirka (russkoustintsy) and Kolyma (pohodchane), others (Ust-Olenyek peasants Verkhoyansk burgers, etc.) are fully assimilated into the local native ethnic groups - Yakuts, Evens and Evenki.

Because of the natural features of the landscape tundra with permafrost soils, lots of lakes and rivers, the average temperature of -15°C and snow for 8-9 months, is completely absent from agriculture and livestock. The main and the main occupation of the Arctic is Russian old-timers and is fishing. The words "fish" and "food" are identical, so often you can hear the phrase "there was food," "food well hunted", "No food sit" [22, p. 36]. All fishing areas traditionally reserved for individual families. This determined the settlement structure and features veteran who settled in dis-

persed small homestead on 1-4 farms along the river. For example, russkoustintsy, according to the exiled SR V.M. Zenzinov of the early twentieth century, a residence homestead in 29, original Russian names are: the old man, Stancyk, Lobaznoe, Kosuhin, Yar Ozhogino prodigal etc. testifies to the priority and limits of development of Russian-E Arctic Yakutia [4, p. 152-154].

The main kind of transport of russkoustintsev and pohodchan were sled dogs. In the contrast to the northern Yakuts have adopted herding of the aborigines, the Russian could not master this form of the transport. Even in conditions of forced introduces the Soviet period in the breeding of deer farms, russkoustintsy, for example, hired to care for them Yukagirs [23, p. 56]. The reason was here, obviously, in the need of the development of reindeer nomadism, that Russian meant a radical change not only the life support system, but the whole mentality.

Livestock or dogs were called skotina - flock, all about sled dogs asserted, in terms of the horse breeding. They used a method of the arranging the pair of dogs in harness, unlike fan-Nenetskiy and harp. Markedly different from the other residents of Yakutsk area of the home (in the direction from west to east, with two doors opening to the inside in case of drifts during a blizzard), Compound (more precisely, it is lacking in its traditional sense), clothing, food, particularly commercial activities Russian old residents of the Arctic. In the spiritual culture and russkoustintsy pohodchane had significantly more borrowing from indigenous peoples (eg, custom nimat - compulsory equal division of spoils among all members of the community, including the sick and young, hunting parties, known as attempts russkoustintsev become shamans, etc.). In Central Yakutia, where the position of the Russian Orthodox Church were more stable, Russian, despite the observance of certain rituals Yakut (feeding spirits hunting, making ribbons on trees, honoring sacred trees), in the home remained committed to their own customs and traditions.

However, it is the Kolyma-Indigirka old-group, despite its small size (at the beginning of the twentieth century, there were just over 2000 people, in the contrast to the southern group - about 25 thousand people) was able to the maintain much of their material culture, the original identity of the old native language and the identity. The main role was played here likely that severo russkim settlers did not have drastically change its economic-cultural type. Therefore, despite the presence of the constant contact with the local population, this group has not progressed beyond the stage of the ethnic adaptation.

In the twentieth century, with the beginning of the intensive industrial development of Yakutia, a significant influx of Russian and of other peoples of the former Soviet Union led to a "smearing" of the ethnic identity of Russian old-timers. According to the census of 2010, in the Republic of Sakha (Yakutia) live 353,649 people, who called themselves Russian. The whole mass

of the modern Russian population of the region can be divided into two groups: immigrants who arrived in Yakutia during its industrial development, starting from 20 years of the twentieth century, and their descendants, as well as current workers; Russian old-timers, whose ancestors settled in Yakutia XVII-XVIII centuries. To establish the exact number of each of these components is not possible, as separate statistics never conducted. It should be noted that according to the Constitution of Republic of Sakha (Yakutia) (Article 42), Russian, and other old-timers have equal rights to indigenous people and they are guaranteed their preservation and regeneration.

On the other hand, the surge of the ethnic identity of the people of the republic in the 90s of the last century was the catalyst for the consolidation processes among Russian veteran Yakutia. The result was independent design, independent of other social organizations of Russian-speaking population of the region, associations (Yakut Cossack Regiment, "The descendants of the sovereign's coachmen," Union of Russian veteran of Sakha (Yakutia), "Russkoustintsy" etc.). Upon recommendation of the leaders of these organizations, the law of Sakha (Yakutia) "List of indigenous peoples and places (areas) they are concentrated in the Republic of Sakha (Yakutia)" dated April 11, 2000 in the list, as a traditional lifestyle, have been included Russian old-timers in the Arctic (and russkoustintsy pohodchane) with spread to them the rights and benefits entitlement. However, already in 2004, due to the policy of bringing regional laws into line with federal law, Russian old-timers from the list of the indigenous peoples of Yakutia were excluded.

Problems of the interaction between the ethnicity, landscape and culture are among the pressing problems of the humanities. Multivariancy combination of the natural and cultural components, diverse lexical, economic, and ideological patterns led to the creation of the unique economic and cultural systems, one of the clearest manifestations of which is the culture of Yakutia Russian old-timers.

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Migration and family-marriage relationships – are the challenges of modern time: Gender aspect (according to the sociological researchers)



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Abstract

The article is based on the sociological studies, found a tendency of reducing family of the family values, changes in the distribution of the family duties of spouses, the role of women in the migration in industrialization.

Keywords: *family values, unregistered marriages, family roles of spouses, marital experience, the role of women in the migration.*

Arguing in general, we can say that women massively entered into the sphere of the public labor, but lately from men about 200-250 years, as well as to higher education. But we should not discount the fact that they were a solid practice of homemaking, parenting, managed the family budget, that is, play an equally important role and gained organizational and communicative skills in private life, as men - in the public. All these things were popular in the modern society.

The mass entry of women into the public labor led to the fact that they became competitors of men in this field. Gradually mastering all new skills and professions, women began to take professional career identity and apply to almost all professional status as men. Securing new identities caused open competition of women's equality with men in the public sphere.

Moreover, in today's society, women's work has been more popular for the several reasons: first is for the same amount of work women could be paid less than men, and secondly is the further division and specialization of labor contributed to the emergence of its species, that women can cope equally with men, and thirdly is the willingness of women to take on any "invisible" and the insignificance of social work. As a result, at a time when the professional status of the modern individual has become dominant, the social role of women has become more and more expanded in the public sphere and it is obvious now that they migrate as men.

To examine the role of women in the migration we use data from a sociological study on the "Territorial mobility in the context of the industrialization as the migrant communicative environment", held as the part of the Block III «The Republic of Sakha (Yakutia) in the beginning of the

XXI century: the ethno-social transformation in the conditions of intensive industrial development of the North» Head –Candidate of the historical sciences V.B.Igantiev) (2010-2012). The survey was conducted in December 2010 in the town of Mirny. For primary data collection, respondents were selected by quota of the sampling. The total mass of the 290 respondents ($n = 290$). Representative error of $\pm 5\%$. The sample is characterized by the following socio-demographic characteristics: 18-19-year-old was 7.6%, 20-24-year-olds - 8.3%, 25-29-year-olds - 12.1%, and 30-34-year-olds - 13.1 % 35-39-year-olds - 12.4%, 40-44-year-olds - 12.4%, 45-49-year-olds - 13.4%, 50-54-year-olds - 12.1%, 55-59 - year - 4.5%, 60-64-year-old - 2.8%, 65 and older - 1.4%. Distribution of the national composition: Russian - 61.0%; Yakuts - 20.0% of indigenous peoples of the North - 1.0%, other nationalities - 17.9%. The level of education of the respondents in the sample, the following: without education - 0.3% initial, less than 8 classes - 2.1%, lower secondary - 2.4% overall average - 17.2% specialized secondary education (vocational schools, College) - 29.7%, incomplete higher (4th year and above) - 5.9% higher - 41.7%, two or more higher education - 0.3%.

In the context of this article briefly examine what changes occur in the family and in the marriage relationships in the opinion of the respondents in the surveyed cities. To illustrate the use of some data from a previous study on the "Lifestyles and consumption" (supervisor - DM Vinokourov), conducted by the Center Regional Sociology Institute for Human Research of the Republic of Sakha (Yakutia) in 2003-2004. To detect these problems was asked a number of the questions to the respondents by quota sample ($n = 556$) in the cities Viljujsk, Nyurba, Yakutsk.

From the answers of the respondents belonging to a quota sample ($n=556$), at the time of the survey, regardless of the registration lived in the conjugal relations of more than half (56.8%) of the respondents. Divorced or widowed, you have interrupted a relationship, it was 31.6% of the respondents. Thus, one way or another with the marriage experience was generally more than 70% of respondents. Of the respondents have a better experience of the marriage, that is, continue to live in the first marriage, more than half - 56.8% repeat their attempts to re-establish a family was 8.7% of the respondents.

Let's see how the respondents evaluate their marriage experience. From the responses, it follows that if the respondent was again in front of a choice, then, of course, they will again be decided on the present its "half" - 37.4% of the respondents, again, would it be a family life, but with the "other / other" - 9.5%, 17.6% of the respondents believe that, first of all, try to make a career, to become independent, and then got a family, 3.2% of the respondents believe that would live an independent life without family, 8.5% of the respondents have ignored this issue, 23.4% of the respondents do not have marital experience.

Thus, more than one-third (38.4%) respondents have a positive experience of marriage and are ready to repeat it again. It is symptomatic that 17.6% of the respondents pushed onto the second place of the family's values orientation, that is, all put forward the desire to «grasp» the important professional role of models, a career, earn a lot of money, etc. These supplements are extremely radical opinions (3.2%) of the respondents, who feels completely useless entry into marriage.

How do the respondents relate to the very social institution of the marriage, to the fact of the official registration of the marriage. Believe that marriage should always be recorded 44.4% of the respondents before the child is not necessary to register the marriage - 21.0% agree with the opinion that the "why to register the marriage, when you can spend some time together, and then disperse easily if it does not the family" - 19.1%, the rest did not want to answer this question.

The data show that the views of the respondents in the nearly same percentage split: one half of the opposed-law marriages, the other tolerant of the unregistered (civil) marriage.

Consequently, we are seeing a trend of the separation of the social institutions of the family and marriage. Alienation is the official registration of the marriage, that is, the legalization of the actual family relationships, the fact of the cohabitation by one household. The spread of the phenomenon may afford the model of the relations that reproduce the changes achieved through the individual the status when they take more skills to make decisions, but it does not strengthen the social institution of the family. "Legalized" living together, of course, increases the number of decays, the instability of the family relationships, turning them into a tool to achieve certain specific objectives. German scholar Johannes Kopp identified five factors that increase the risk of divorce: reducing investment in marriage, change of marital production, decreased the strength of the social obligations, reducing barriers to divorce and alternatives to improve upon it [1].

Obviously, we can assume that the full significance of the weakening of the family in the eyes of the respondents to some extent evidence of that. Thus, the data obtained to the question "In your opinion, the importance of family, consisting of father, mother and children today are growing or, conversely, decreasing?" They are shown in Table 1.

Table 1

Valuation of the importance of having the complete families by the respondents, in percentages

Answers	%
1. Yes, today there is the advantage of such a family (both parents and children)	40,1
2. Apparently, not always live a family, because one spouse often does not work, try to live "in charge" of the wife / husband	27,5
3. Obviously, family, children hinder a career, earn more money, be creative, etc.	4,3
4. Now in many ways disadvantageous to have a family, so it is more convenient to have and have only one child, without entering into marriage	6,7

5. The person needs to have more freedom in the choice of the sexual partner, and this prevents the family life	1,3
6. Other variants of the answers	1,2
7. No answers	18,9

According to Table 1, support of the full families 40.1% of the respondents, 27.5% of the respondents are not satisfied with "passivity" of one of the spouses in the livelihoods of the family. As you can see, the couple equally imposes requirements to each other as a "getter". Apparently, this group could be related to a "staggering" because they do not unconditionally accept family value orientation, placing it next to other values. Clearly do not recognize family values rather complete family consisting of a mother, father and children, 6.7% of the respondents preferring incomplete family. Completely reject of the "centrism" of the family, that is, follow-family values, 5.6% (in total) of the respondents.

Of course, the area of today's social relationships, including family, has revamped the loss is still relevant segmental differentiation and stratification, although, of course, they have not disappeared entirely. And it is difficult to imagine that a woman would return to the family hearth, leaving the field of labor. This is illustrated in Table 2.

Table 2

Distribution of the women's answers, what they did, if their husbands fully financially support their families, in the percentages¹

Variants of the answers	%
1. Stay at home, do household chores, children	5,3
2. Settled on a less congested job to spend more time with family, children, himself	23,8
3. Hardly would stop his career, I can not "work", I have an active character	14,7
4. I would devote himself fully to his beloved work, the implementation of its long-held dream of what now is not enough time	9,4
5. No answers	7,2

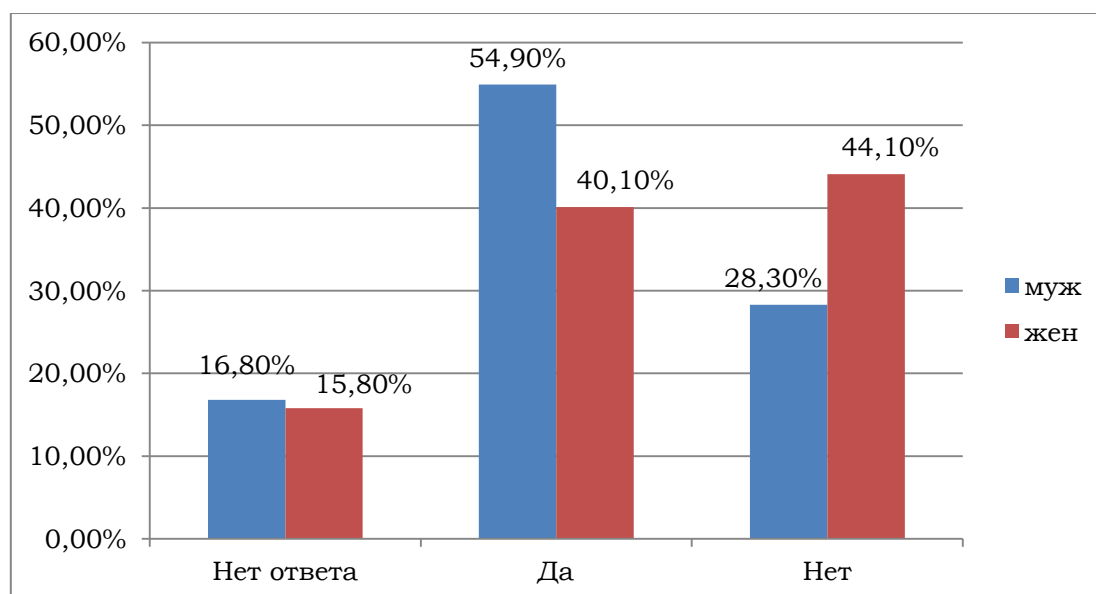
Thus, the data in Table 2 shows that sitting at home, not to participate in social labor, that is, their traditional way of life, which is typical to 5.3% of women. The rest of the respondents are not willing to end its participation in the public sphere. 38.5% of respondents (in total) one part justifies its participation in social labor as the desire to obtain a livelihood, so another interviewed this need, that does not think of herself out of her.

Interesting to see the attitude of the male respondents to the role of «breadwinner» of their wives. So, ready to take that role and take most of the household chores over 14.6% of the respondents, 3.8% said "My wife now earns more than me, and I support it in all"; 11.2% respondents have traditional views, believing that the wife should do more housework.

¹ The remaining share (39,6 %) of the respondents – are men.

In summary, it can be noted that a departure from the traditional notions of the family and marital relations reached such a change, when in a certain part of the identified social consciousness, first, they are perceived not as a primary value, but as a tool to gain access to specific public goods. For example, as a channel for the migrants thrifty consumer devices at entry points. Second, the civil marriage (cohabitation without registration) gradually reducing the responsibility of the couple to each other, children, other family members, also tends to weaken the stability of family relations. Third, if there has been a similar trend, it has implications for all other aspects of life. Clearly, this is an evolution of the relations between the sexes, which are primarily related to family, marriage, etc.

Turning to the presentation of the another part of the problem, briefly outline the demographics of the city, where residents were surveyed (Picture 1).



Picture 1. Answers to the question "You can work and earn money but normally it is impossible to live here permanently"

In 1979, according to the All-Union census in living peacefully 56.8 thousand people. Came here from all over the Soviet Union. By 1989, it reached its peak - 86.5 thousand people. However, after the collapse of the USSR it since 1995 gradually went into the decline (83.2 thousand). This is - a gradual outflow of the visiting parts of the population, with a ground breaking property, real estate, slow to get back to preserve their rights to them. We present numerical data loss of the urban population by the year: 2000 - 81.2 thousand people in 2002 - 82.1 thousand people (Russian census) in 2003 - 82.2 thousand people in 2004 - 81.8 thousand people in 2005 - 81.8 thousand people in 2006 - 81.0 thousand people in 2007 - 80.0 thousand people in 2008 - 79.0 thousand people. [1] However, we can not say that this decline is characterized by large "holes", from 2004 to 2006 was characterized by greater stability in the population.

In the post-perestroika period has been a change in the direction of the migration. So, from the 90s international migrants on the one hand, mostly coming from the adjacent or nearby regions of the Russian Federation, on the other - is an increasing proportion of the villagers who come from rural settlements of the republic, or those who just arrived from outside the region, moving from an industrial area to another.

If we turn to a study, the respondents from the rural areas of the country gains 15.9% of the respondents from urban republic - 8.6% of the rural areas of the Russian Federation - 17.9% of the rural areas of the CIS - 3.1% of the cities of CIS countries - 11.4% did not answer - 32.1% of respondents, some of which may be a native of the city, although this number differs from the previously described (37, 6% indicated that they are natives of the city of peace). Of the share coming from the urban settlements may be the part of those foreign workers, as mentioned above, who moved from the city to the country.

If divided by gender, in the sample of the respondents, the natives of the male – are 32.7%, and Native women - 40.7% of the respondents.

It should be noted that the city of Peace was originally built on the site of the diamond fields of external migrants, so the bulk of the local population began to arrive there in the post-perestroika period. Mirnyy – is a city with mono production, so the population is very sensitive to any restructuring of the diamond-mining company "ALROSA". Obviously, one cannot ignore the fact that in 1994, opened a branch of the Yakutsk State University. Hence, some of the migrant - is continuing his education the young people who come here for five years, at least, from the surrounding areas. Thus, according to the 2006, for 12 years of the Polytechnic Institute released 865 graduates, including 466 full-time graduates found jobs in different departments "ALROSA". [2]

From what place are coming respondents (men and women)? Are there gender differences in the migration flows? Thus, in the rural areas of the region came 14.2% of men and 16.9 % of women, of the cities in the region - 11.5% of men and 6.8% of women in the rural areas of the Russian Federation - 12.4% of men and 10.2% of women, of the cities of the Russian Federation - 18.6% of men and 17.5% of women, in rural areas of the CIS - 3.5% of men and 2.8% of women, of the cities of the CIS - 12, 4% of men and 10.7% of women. As you can see, the large spread is observed, except for streams coming from the cities of the country, dominated by men. However, this difference may be due to the arrival of male migrants who arrived in the Republic, and then re-ride from city to city.

So, we can assume that women currently in the migration of peace has increased significantly, which has a beneficial effect both on the demographic structure of the population and its natural growth.

The analysis of the marital status shows that the first marriage is 50.4% of men and 51.4% of women in the second - 11.5% of men and 14.7% of women, in the third - 2.8% of the women surveyed and in the fifth and more - 1.8% of men and 0.6% of women. Children are 64.6% of men and 80.8% of women, do not have children - 24.8% of men and 16.4% of women. As for the other members of the family, almost every second of men (52.2%) was one of the members of his family was one of the family members and 48.0% of the women surveyed. In 2.7% of men survived by his wife, in 1.8% of men and 4.5% of the women interviewed were children. In 37.2% of men and 34.5% of female respondents were parents. In places the outcome remained the parents of one of the spouses in 2.7% of men and 6.8% of the women surveyed. The data show that in the vast city of Mirniy in case family migrants arrive with your family, that is, both spouses.

Maintain the respondents a relationship with the remaining relatives? An affirmative answer was given by 34.5% of men and 32.8% of women; go visit his family during the holidays 12.4% of men and 15.3% of women. Long lost 3.5% of men and 1.1% of women. Thus, the data show that the connection of the exit persist in the majority of the migrants, which means the preservation and the development of their kinship network.

As you know, coming lone workers can create their families at entry. Thus, the question of when a family, had been received: 24.8% of men and 30.5% of women came as a family, have entered into the marriage on arrival 29.2% of men and 31.1% of women and did not want to answer this question, almost a third (33.6% men and 31.6% women), never married 12.4% of men and 6.8% of women. The data show that men have a difference of 4.4% between the BEFORE and created his family's arrival in the city of peace, while among women the difference is negligible (1.9%). Apparently, the new location of introduction easier to enter the family and marriage relationships, as the arrival of a new face in the workplace has always attracted more attention, it is possible to select, establish new contacts, etc.

Does this mean that men tend to prefer to enter into a marital relationship at new entry points, because come alone, non-family? Probably due to the expansion of the civil forms of the marriage have more opportunities to live together with different duration of time. The national composition of the family members of the same nationality in 63.7% of men and 66.7% of women, of different nationalities - from 20.4% of men and 26.6% of women. According to the survey, 6.2% of men and 7.9% of women are in a common law marriage.

Thus, the above data shows that some of the migrants interviewed in the places outcome have relatives and family members with whom they keep in touch. Part arrived in the city of peace came into family and the marriage relationships on the arrival at the place of their choice.

So what attracts migrants to the city of Mirny? As the data in Figure 1, male respondents (54.90%) more than women, tend to view the city as a place to earn money, but it is impossible to live permanently. Opinion of female respondents divided almost equally. This obviously indicates that they are set somewhat deviating from male respondents. They seem to start a family, furnished their living conditions, the name of the children turn to other issues that they care about and more interested than men.

In favor of this statement presents data in Figure 2. The data show that the degree of every three respondents working women and one other man. In other embodiments, the large spread between the responses of men and women was observed. But still left unanswered on the question more women (41.80%).

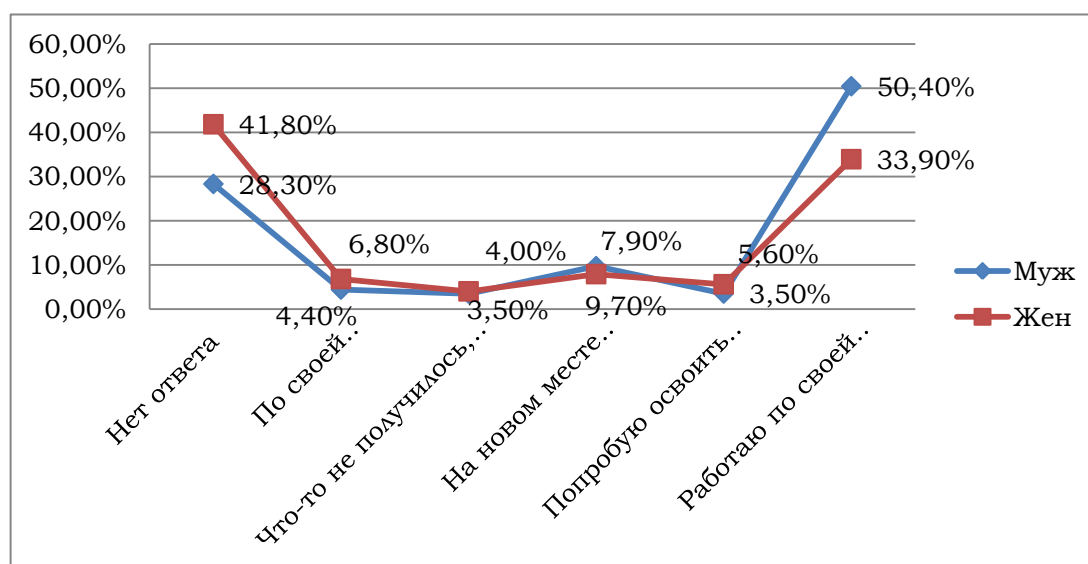


Figure 2. Answers to the question, whether the respondents have changed their specialty in the new location

Now make a comparison between the respondents, with what cannot be reconciled in entry workers (Figure 3). Here and later assumed the answer of the respondent to agree or disagree with the above statements in the questionnaire.

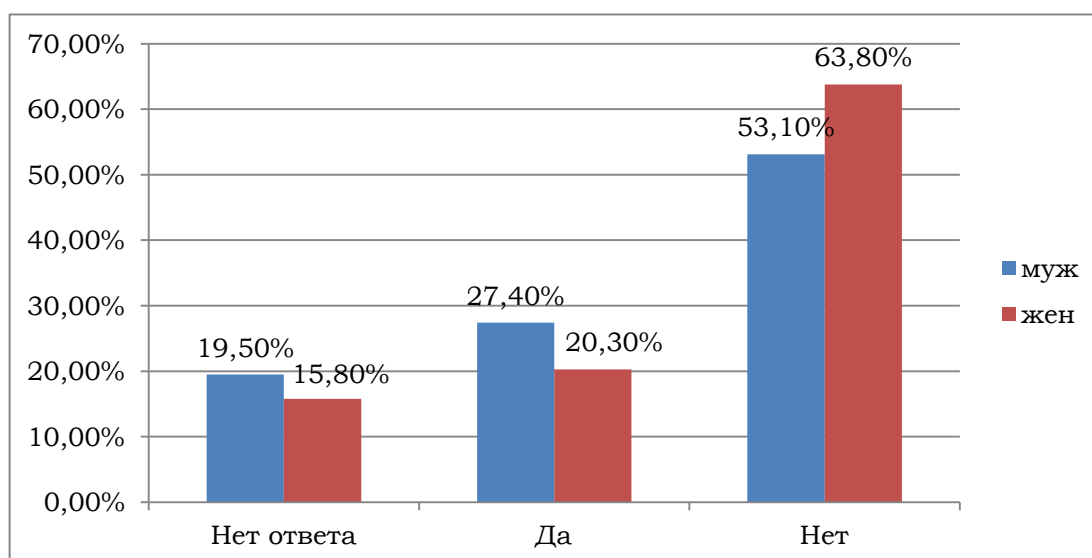


Figure 3. Answers to the question "In the way of the life of the local population is particularly that I find it hard to accept "[3]

So, more implacable are men, who were interviewed. Women were more tolerant to other people's features. By the way, women in daily life often have to get in touch with the local community in addition to occupational areas. Thus, if children attend pre-school or school, usually in parent-teacher meetings or other events attended by more mothers than fathers, or some of the women involved in the network form of distribution of cosmetics, medicines and the like, which involves expansion scope of communication with the local community.

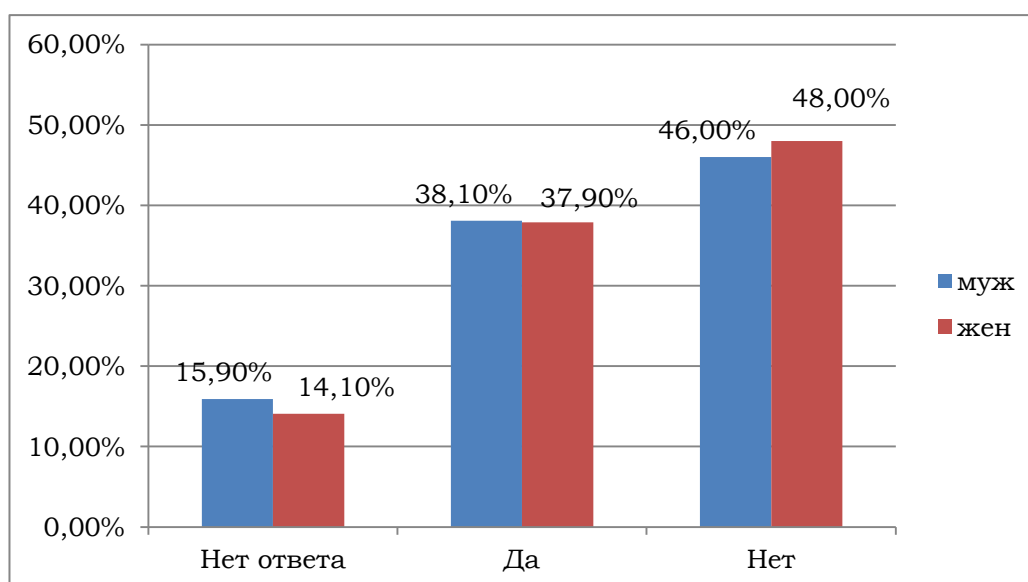


Figure 4. Answers to the question "Here we have to strive to live like everybody"

Certainly more frequent communication on a variety of issues with the local community promotes integration and understanding that each ethnic group its own characteristics. Quite indicative submitted the answers given in Figure 4. Although, of course, argue that most of the interviewed men and women do not accept the rules and regulations of the community, only the

responses to one question it would be incorrect. But first it can probably be noted that the "do not accept, because I do not intend to stay here for long.

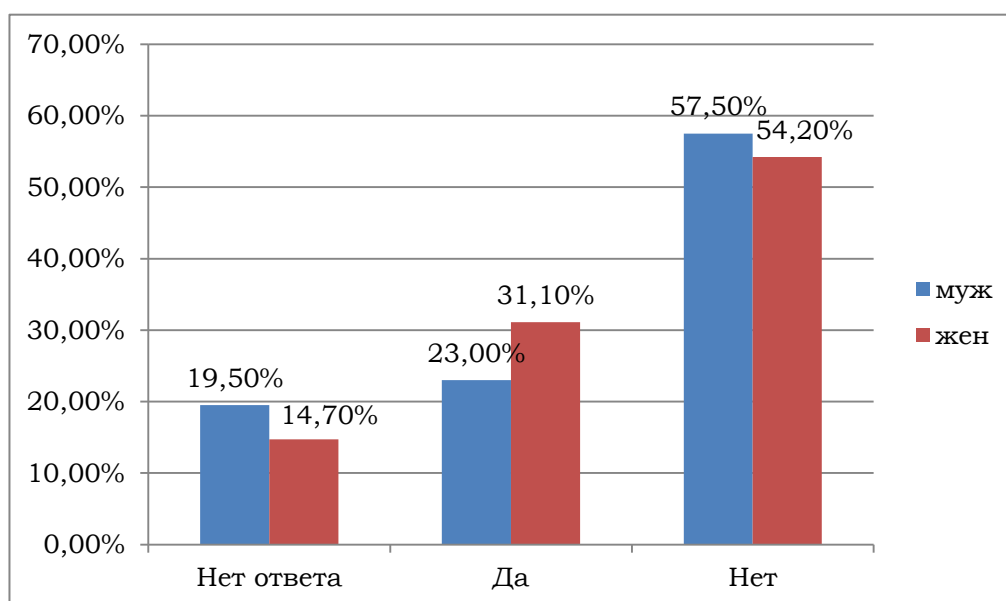


Figure 5. Answers to the question "I would like my children or grandchildren are indigenous residents of the republic"

In favor of this, obviously, by the data shown in Figure 5. Even fewer had going "to take root here," and the male respondents (23.0%) the least. These findings are supported by the answers to the direct question of the migration intentions in the future (Table 2). And on the basis of sex intention to change permanently the large spread in the answers of the respondents are not observed.

Table 2

Migration intentions of the respondents, in percentage

№	Migration intentions	Gender	
		male	female
1	Yes, surely I will go	31,9	31,1
2	I will go, if I have an opportunity	40,7	35,0
3	Скорее нет, чем да	1,8	9,0
4	Rather no, than yes	3,5	10,2
5	I don't know, I never think about this	16,8	13,6
6	No answer	5,3	1,1

Clearly, based on these data, it can be argued that on the base of the industrialization when a certain level of the infrastructure development, the share of women in the migration is almost the same rate as men.

How justify the respondents their desire to change the permanent residence? To the direct question of why they are going to leave, it was following distribution of answers, which is shown in the Table 3.

Table 3

***Justification of the respondent's intentions to change their place of the residence,
In percentages***

№	Reasons for the migration intentions	Gender	
		male	female
1	There, where I intend to go, I got housing	9,7	6,8
2	My children live there, they invited me, they need my help	5,3	7,9
3	Originally, I had planned as soon as I will finish work to go there	16,8	13,6
4	Here is very severe climate, it doesn't suit me	9,7	22,6
5	Need to go to the relative homes, to the relatives, friends	18,6	15,8
6	I do not know, here is unbearable to me, I want to go somewhere far away	17,7	9,0
7	Others	11,5	9,6
Sum*		89,3	85,3

* For those who did not have the migration intentions were asked to skip the question.

Thus, from the data in Table 3 shows that female respondents more than men, tend to justify their intention to external factors: the harsh climate, family reunification, while the male respondents reported more on the emotional and psychological, "last minute", pulls in homes, the original plans.

Attachment surveyed funds to purchase housing in the place of origin, of course, one of the rationally-designed migration channels, but is now little is available. It should be mentioned that it starts to get institutionalized across countries, mortgage institutions. For example, in the city of Peace - the insurance company "Diamond Autumn". One of the forms of migration - "family reunification" - has little in the data level, which suggests that the nuclear family is in full force in the present place of residence, family reunification and adult children can be combined with other indicators mentioned study republic respondents of the future migration.

Answers to the question "How many times have you changed your permanent residence of life?" Confirm our hypothesis that the activity of women in the migration during the industrialization almost reaches the same level as men. So, once changed domicile 37.2% of men and 38.4% of women, and from 2 to 3 times - 27.4% of men and 32.8% of women, from 4 to 5 times - 12.4% of men and 6.2% of women and 6 or more - 5.3% of men and 4.0% of women, did not answer 17.7% of men and 18.6% women.

In summary, we can conclude that:

- ✚ There is a process of the separation of the social institutions of family and marriages. Alienation is the official registration of the marriage, that is, the legalization of the actual family relationships, the fact of cohabitation by one household. This, in turn, leads to a change in the

family relations, giving them a partnership. And like nature of the relationship involves the calculation of the expectation and equal investment on both sides, be it material or otherwise. Thus, in this type of relationship gets more rationality and calculation;

- ✚ The spread of the phenomenon may meet the trend, which reproduces the changes achieved through the individual the status when they take more skills to make decisions, but it does not enhance the social institution of the family. "Legalized" living together, of course, increases the number of decays, the instability of family relationships, turning them into an instrument to achieve some specific goals;
- ✚ Findings support of the participation of women in the migration process of the industrialization in that they reach almost the same level as men;
- ✚ Unlike men, women respondents were more inclined to base their migratory intentions of the external factors such as harsh climate, reuniting with family and other reasons, while male respondents - the emotional and psychological, "here is unbearable to me," pulling in their homes, the original plans etc.

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Reviewer – Uliyanovskiy Viktor Ivanovich,
Doctor of Social Sciences, Professor.

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Russian woman in the rural Yakutia in the second half of the XX century¹

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Abstract

Russian women of Yakutia in the rural areas of the second half of the XX century were a social group with a difficult complex structure. The separate interest is Russian women who came to work on a governmental contract. In daily life, they had to overcome the social and cultural challenges, including gender. Successful socialization of Russian women in the villages of Yakutia promoted general political factors, as well as regional ethno-cultural traditions.

Keywords: *social history, gender, Russian daily life, North, Yakutia.*

In such a large country as Russia, there is undeniable considerable variability of women, depending on the regional conditions. In the Russian provinces in the past only the twentieth century were different, including the contradictory social processes that influence the formation of gender. In the region of the North, Siberia and the Far East specific local conditions in the field of gender and manifested by districts. In this light, are very interesting gender characteristics of the Russian population of Yakutia, constructed and demographic and ethno-cultural characteristics of the region. There is a considerable range of scientific literature on the history of the Russian population of the region. Particularly rich in pre-revolutionary historiography, shining names SP Krasheninnikov, FP Wrangel AF Middendorf, AP Schapova, WI Jochelson, F. J. Kohn, II Maynova. The processes of formation of Russian old population of Yakutia, its business activities, inter-ethnic relations in the work covered by FG Safronova, GP Basharina, VN Ivanov, and other researchers, ethnocultural characteristics of the Russian living in the non-environment, pay attention to . Romanov, T. Petrova. Soviet period of Russian Yakutia not become a separate subject of study, some aspects of the subject, in particular ethno-cultural and demographic, seen in the works of DH Bragina, VB Ignatiev. Christianity - another area of Russian history of Yakutia. Development of Orthodoxy in the region, the history of Orthodoxy missionaries studied EE Shishigina, AP Nikolaev, IE Yurganov also touched on this theme in the works of H. Oglezneva, SI Boyakovoy, ND Vasilyeva , OD Yakimova, etc. But in the "Russian" historiography Yakutia special papers devoted-ber of wom-

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en who do not. So far only a few steps are taken on the reconstruction of place and role of Russian women in the social space of the region.

For nearly four centuries of Russian ethnicity, women accounted for an organic part of the population, were integrated into all social structures, made its own contribution to the regional community, social stability, moral and spiritual cohesion and the cultural tolerance. Status and place of Russian women in the complex social networks of the multi-ethnic and multi-confessional region changed in the course of historical time, adapting to the changing socio-economic and cultural conditions. And paradoxically, not only privacy, gender behavior, but also the issues of employment, professional fulfillment, social activities of women of Russian nationality had not been the subject of a separate scientific attention.

The study of the existing literature and gender review of the regional sources confirm the absence of the specific studies on the sources and intended use. Note that on the materials of the Republic of Sakha (Yakutia) has not been studied in the general evolution of the gender for a long period, was not enlightened gender behavior of women of the certain ethnic groups. In addition to the local history and biographical publications in the scientific literature so far outlined only a few touches to the portrait of a different nationality yakutyanok adjustment period and the crisis of the late twentieth century. [3] Phenomenon of Russian woman living in inoethnic environment, which provides a broad palette of the research challenges, especially if the surrounding society is different from its "parent" ethnic race, cultural norms and stereotypes.

In the article, we will focus on a specific period of time: an attempt to study the case of "a Russian woman in the village of Yakutia" in the chronological framework of 1970-1980's. The article claimed data from published sources and literature, in particular, shed light on the subject of inter-ethnic marriages. Used field data's collected with the support of the years 2001-2011 for the RHF in small villages in Central Yakutia, the representatives of the Yakut and Slavic ethnic groups. The analysis focused dictated materials and angle of illumination: a Russian woman in the mirror of the rural oral history.

During the period, the Yakuts numerically dominated in the village, remaining essentially "rural people." In 1970, 80.5% of their total population lived in the rural areas, in 1979 - 76.9%, in 1989 - 74.3% [4, p. 17]. In the rural areas also lived mostly indigenous minorities of the North, which was due to the nature of the traditional occupations of the indigenous people and the migration of less mobility. The countryside and today continues to be a sphere of the life of indigenous ethnic groups, the whole group of the regions in the modern Yakutia almost is one nationality. In the traditional industries are mainly employed residing in the area by indigenous people.

In 1970, the resident population of Yakutia was only 664,123 people, by 1989, the population had grown to 1,094,065 people, which is exactly in this period is given to the retained northern republic from the first time in its history, crossed the population of one million copies. Russian in 1970 were 47.0% of the total population, the Yakuts - 43.0% share of the Russian population grew steadily: According to the 1979 census, the proportion of the total number of Russian Yakuts was 50.4% by the end of the 80s remained at the level of 50.3% [6, p. 8, 4, p. 9]. But in the rural areas of Yakutia lived relatively little Russian - in 1970 in the village of Russian was 39.6 thousand, in 1979 - 58.3 thousand people, and in 1989 - 53.9 thousand people. About 54 thousand people in the rural Russian million republic - it's a small group. Women in rural Russian was always less than men: according to official statistics in 1970, there were 18,647 against 20,973 men, 27,172 men against 31,162 in 1979 and 25,085 against 28,873 men in 1989 of du [4, p. 17].

It is clear, that the numerical predominance of men due to the nature of work and quality of life in the rural areas: women's choice of jobs in the Yakut village remains narrow today. In the 1970-1980-ies a Russian woman in the Yakut village could claim a place in the field of the agricultural production, education, health, culture and commerce. If she were newcomers and had appropriate education and profession, it could offer a place milkmaids, calf, field crop at a local farm. Given that existed in 1970-1980's of the working conditions, we can talk about the low attractiveness of the village for working-age Russian woman.

In the small rural settlements Russian women came through the following channels: first, on the public distribution specialists in the field of education, health and culture, and secondly, as family members of such specialists, often in tandem with her husband, a teacher, health worker or employee of the technical services. In the oral history of the small villages of Yakutia is almost always present figure of Russian women - paramedic, midwife, teacher, librarian, or it is present as a spouse Russian man - "the radio operator's wife Victoria", "wife meteorologist Wasi" and the like. Another way for a Russian woman in the Yakut village - a marriage with a local man. This option is found in the various oral histories of the 70's and 80's of last century. It was more about the marriages of young professionals, but we have fixed and marriages of people in middle and old age, which are often repeated for one or both spouses. Informants often present such stories as romantic, emphasizing originality, some adventurous this choice [8, 10].

It can be said that by the middle of the last century in the Yakut villages existed the positive social image of Russian women. It was formed by Russian women - representatives of old residents and newcomers from other regions who worked in the fields of education, health and culture so enthusiastically at the selfless, that for many years have identified almost iconic status in

the minds of the rural inhabitants of Yakutia. [5] In the second half of the twentieth century in the Yakut villages still living and working, albeit in small numbers of Russian evacuated or deported during the war, including women with higher education, with a fine education, which also affects the positive image of Russian women. Thus, the status of Russian women with social prestige in the profession covers the period of a teacher or health worker, was quite high. With respect to these women in the memoirs and interviews of people living in small villages of Yakutia is extremely rare negative or critical assessment of their personalities and everyday behavior. Perhaps this stereotype regional breakdowns of the respect for Russian women - teachers, medical and obstetric staff. Since the beginning of the last century they were a small but popular and the vast majority of very professional social group.

In addition, the materials on the oral history of Yakutia 1970-1980-ies have highlighted the complex, sometimes contradictory image of the popular Russian women, often with negative assessments of their social behavior. In particular, often points to the unfortunate short stay of Russian women in the Yakut village, such as a teacher or a doctor. Staff turnover was high young professionals: a complete lack of the improvement in the Yakut villages, regular transport links between the small settlements, combined with harsh climatic conditions made it difficult to adapt to the foreign language community. This included not only young women, but also men. But somehow, in the oral histories of the most critical (accusingly - LV) just remember leaving women teachers, doctors. May interrupt their activities most painfully affected the agricultural society.

One mechanism for "fixing" the young professionals – is the Russian women in the villages was a marriage with a local man. If the colonial period of marriages of local men with Russian women were rare, primarily because of their small number, in the second half of the twentieth century the number of Russian women – (starozhilok) or different generations of the migrants have been enough. The situation for them in the marriage market was favorable: a region with abundant raw Slavic grooms working age, this is one thing, and secondly, a Russian wife was quoted as men of other nationalities, including local residents. Russian women had a large selection of the marriage partners. Interestingly, under such favorable conditions, Russian women are married and with indigenous peoples of Yakutia: Yakuts, Evens, Evenki, Chukchi. Fertile ground for the inclusion of Russian women in the local marriage market maintained a culture of Soviet internationalism and regional traditions of tolerance for ethnic marriages. Due to its small size and representatives Yakuts Northern minorities traditionally tolerant of mixed marriages between persons of different nationality and religion. During the Soviet period in the daily life of the Yakuts submission

on the admissibility of marriage with Russian strengthened: it Yakut-Slavic (with Russian and Ukrainian) marriages were the largest group of mixed marriages.

For Russian women, who arrived from the unknown edge as a young professional or a family member of the migrants, they marry local men, especially with a strong social status, means the solution to many domestic, physical and financial problems. Many informants believe that the children of mixed marriages with Russian even in ordinary external data, the mother and father look bright, impressive, and often have a talented in the arts, sciences and sports. In Yakut villages, many children traditionally respectful and availability of healthy children, as one of the causes of the marriage with a Russian woman.

Analysis of the oral stories detects the pragmatic aspects of such a marriage: in the villages of Yakutia Russian wife for a man-Yakutia, with education and profession, could be often served as a kind of the "social elevator". He migrated to a larger settlement in the industrial town or city, sometimes outside the country. In other words, is opening its new professional and career horizons. For the members of the party, Komsomol and trade union activists are Russian wife could also become a "pass" up - in Soviet society a man looked the embodiment of the idea of the true internationalist, in the multiethnic republic very welcome.

In the oral stories of the Yakut village lights the fact of the prestige of the Russian brides for the rural local suitors. We emphasize that, among its benefits our informants noted the ability of the Russian women to build upward mobility of her husband, "a man mold of what happened," to encourage and support its ambitions professional career. Around the marriages indigenous men with Russian women there is a whole layer of the myths, legends and prejudices. We informants occasionally voice an opinion about the "special fragility" marriages with Russian women, but statistics at village level, ulus or regions do not confirm this view. Perhaps it is more indicative of heightened attention to such marriages, rigid fixation of any negatives.

Russian woman in the village of Yakutia of the period 1970-1980-s caused special interest as a representative of a different culture. This is evidenced by the colorful memories preserved by the plot threads. In everyday low Yakut village for her closely watched, monitored the behavior, speech, manners, appearance. They often served as a kind of standard, a role model. In particular, one of the informants admitted: "I was dreaming, that's out of school and going to dress up as a Russian teacher Vera - walk in gipyurnoy white blouse. I will be a well-dressed as Russian women in the movies and in magazines ". [7] Often report industry, economic efficiency, skilled skills of Russian women, especially in the home, gardening, cooking of European dishes.

But next to the positive characteristics of the intelligent Russian women in the oral history of the small villages of Yakutia is prevalent and negative evaluation, addressed to women of Russian nationality. In this case, they belong to the late Soviet period and to the women of the "Russian appearance", who worked in the fields of the trade and transport services, as geological exploration expeditions, etc. The analysis of these estimates shows that the informants reproducible negative perception is mainly due to gender behavior Russian women, in which the indigenous people highlights: a) displays low overall culture of behavior and communication b) non-compliance of the appearance and the social behavior of the Russian women have traditionally taken then, gender norms, including ethnic.

You must specify that rural Yakuts the time of the "Russian" is often numbered among all the women of European appearance, or simply Russian, with whom contact in the areas of the transport and trade services, of the staff of the geological expeditions, etc. The illuminated period of the migrants, primarily engaged in these areas, dominated by those with a low educational level, coming from labor surplus areas in search of the northern earnings. Representatives of these groups according to the type of psychology of social behavior in Soviet times were defined as temporary workers.

Of course, Yakutia in 1970-1980-ies was an oasis, preserved in its original form gender of the ethnic traditions. In the sphere of everyday gender behavior at that time inevitably absorbed components and general Soviet, and ethnicity. The analysis of the collected material exhibits rather high safety of the traditional gender norms in Yakuts, which can be seen, in particular, the reconstruction of everyday behavior of both men and women. It is noteworthy that in the Yakut villages 1970-1980-s men demonstrated accentuated masculinity characteristic of the traditional societies, such as indifference to pain and weakness, to his appearance, rude manners. How to remember the informants, the men tried to look and act "just like men: simple, with no frills" [8, 9].

With relations to women, including the Russian residents of the villages, were presented as the conservative gender requirements. Field data confirm the existence of the elements of the traditional gender in everyday low Yakut villages. In particular, the elements of women's behavior in the home and in the society, 1970-1980-s regulated fairly traditional notions of what "can" and "can not" a girl and a woman. In particular, in the rural society was not accepted by the girls and women to demonstrate their sexual attractiveness, physical forms. In small villages, was a rare use of the cosmetics, clothes, opening the neck and arms, short skirts. Just dress like Russian women, believed in remote rural areas, based apparently on their own experience and the visual images of Russian contemporaries from magazines, TV shows, etc. Note that the majority of the rural public

opinion permitted the Russian woman to dress and look different than female Yakut, precisely because of their Russian origin.

Less tolerant, critically evaluated the Yakut village of their behavior at home and in the public places. Older women in the villages of Yakutia 1970-1980-ies did not take different manifestations of female Russian emotion, ethnic norms of behavior, such as a funeral. Were typical of the following argument about Russian women: "Russian woman gave birth in the district hospital, screamed, swore so ... Is that the way to celebrate the birth of the new man? ", " Loud cry, cry in public only Russian women. It is wrong to openly show their grief ... "and so on [8, 9, 10].

In this case, the Yakut villages welcome any of the respect for the culture, customs and language of the Russian women. Especially prized kind to old people, neighbors and children - this communication occurs gradually the universal markers "technique" a stranger, who arrived in the village, a Russian woman. "Once there nurse Russian, Valentina. Very good man, a good as aiyy (white spirit of the Yakut beliefs) selfless, considerate. We have almost all the time with her children were named Valentine or Valentinus. Then moved to another area of Yakutia, in the wake of the children had grown up ... "- this recollection is typical of the Yakut village [7, 8]. With great respect to the oral history of the Yakut village mentioned visiting Russian women, quickly mastered the Yakut language. The practice of forced use of the Yakut language in the region is not historically, but Russian old-timers or migrants, long-term residents in the villages, the Yakut language owned. According to the census in 1989 in a rural area Alexeyev (now Tattinsky ulus) of 373 residents saw 363 Russian native languages is Russian, but fluent Russian Yakut 59 people and 7 Ukrainians. In Churapcha area of 277 Russian 45 people fluent in the Yakut, a Verkhnevilyuisk - from 615 people Yakut knew 103 Russian in Suntar - from 1286 to the Russian Yakut spoke fluent 132 [4, p. 38, 41, 52, 55]. In industrial areas, the proportion owning Yakut language Russian was scanty, and it was mostly natives of the country.

Analysis of the oral stories of the Yakut village shows that the agricultural society of the considered period, Russian women are perceived more than "their own". General system of education, common moral values in the society, many common life strategies have created a basis for the mutual understanding and co-existence in the rural societies of Yakutia people of different nationalities. Successful adaptation of the Russian women have contributed to the objective and subjective factors: Soviet culture, upbringing and education, supported by the principles of the humanistic dormitory were supported by the Yakut traditions of the ethno-cultural tolerance.

The history of the contacts of the Russians with Yakut, with Russian culture has almost four centuries. Because of its scarcity of Russian women in small villages long perceived as alien fancy.

But about the middle of the last century Russian woman Yakutia completed a certain stage in their regional identity: the once mythical creature (unknown, strange, frightening because women) of the colonial period, it was the way to the recognition as a friend, familiar, "their" members of rural society. Russian woman has firmly taken its ethnic and cultural niche in the countryside every day responding to the challenges of the reality: remaining "foreign" or becoming "his" in the Yakut settlements.

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The problem of the social exclusion of the working emigrants in the light of the development of the Arkhangelsk region



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Abstract

This article analyzes the reasons of the appearance of the problems of the social exclusion of the working migrants, it is put emphasis on the positive role of labor mobility in the light of the development of the Arkhangelsk region.

Keywords: *social exclusion, labour mobility, Arkhangelsk region, life level, development.*

Currently Arkhangelsk region is the problematic, subsidized regions. According to data presented in the socio-economic development of the Arkhangelsk region by 2030, the average productivity in the economy of the region is only 15% of the current level of productivity in the USA economy. The situation is exacerbated when meeting with the data of Rosstat. In 2002, the population of the Arkhangelsk region (including the NAO) was 1 350.5 thousand people, whereas in 2010 it was 1 254.4 thousand.¹ The difference was 96.1 thousand. The population may be reduced by the reason of the death or because of the migration. Only in 2010 has left the field of about 8000 people². Leaves, especially the economically active population, in other words, that the human resource that should be the locomotive pulling for a development area. All the facts are obvious to those who are interested in the socio-economic trends in the region, but, nevertheless, they become even more relevant in light of the identified strategic priorities of the Arkhangelsk region. These include the rise of the shipbuilding and engineering industries, the construction of transport infrastructure, supporting forestry, attracting tourists to the region. Series can continue. Based on the foregoing, in the Arkhangelsk region appeared, and the further development of the existing socio-economic conditions will only progress, the problem of the lack of high-performance workforce that can have a constructive impact on the development of potential

¹ The number of the population. Territorial department of the Federal State Statistics Service of the Arkhangelsk region. URL: www.arhangelskstat.ru (date of access: 08/24/12).

² Why leaves the Arkhangelsk region young people? URL: <http://www.ommedia.ru/publishing/itogi/rating14.shtml> (date of access: 24.08.12).

points of growth in the region. In my opinion, this issue has already crossed the border, within which it can be solved the resources available in the region, so the output is seen to attract labor from staff.

Despite the vulnerability of this sanitation in front of the criticism of the experts whose main argument against is the idea that in the region, dominated the hidden unemployment, especially among young people, and attracting workers from other areas directly contribute to its growth, a highly skilled labor migration to the Arkhangelsk region will have a beneficial effect on all of its existence in the future the next 50 years at least. Moreover, the integration of the foreign workers to enrich the local culture of the region, its identity among other subjects of the Russian Federation. It should be noted that such precedents in the history of the Arkhangelsk region have been, so we turn to him.

The first wave of the migration to the region surged in 1930-1931 on behalf of the dispossessed farmers in the developed agricultural areas of the country, in 1940, it had already been Polish soldiers (called "osadnikov"). Not to mention, and those coming to the area for "his release," in the prison. Of course, speaking of the majority of the prisoners, of any beneficial effects on the culture out of the question, since the camp life could predispose them to it, but the mutual communication with other groups of migrants increased the educational capital of local residents that implicitly influence on the transformation of the culture. An example is the language, where the interaction between different the social groups most clearly etched.

The reconstruction of the country after the war and the resumption of the industrialization required the state informed decisions on moving the remaining workforce. The preference was given in the favor of youth. Ideological appeals caused the young people a sense of unprecedented patriotism expressed in the creation of a new socio-economic area, the map of which would be factories, road and rail links. In the Arkhangelsk region construction of the brigades began to arrive, many members of which were for the permanent residence, starting a family, thus improving the demographic situation in the region. It must be noted experts sent to the area on the distribution of "Without a graduate of Leningrad, Moscow, and other leading universities in the country, as well as the experienced professionals would be impossible to create such, for example, companies such as the Russian Center for Nuclear Shipbuilding in Severodvinsk, Arkhangelsk and Murmansk Sea Port, pulp and paper mills, to organize production of hydrocarbons, ores, learn the Northern Sea Route, a modern social infrastructure "[3, p. 154]. From this brief historical perspective clearly shows that the involvement of migrant workers in the area will not be new, but it really is able to give impetus to the development of the region.

If the process of epy labor migration starts again, you need to figure out all the possible risks. In my view, the most important risk, from which all other derivatives only, it is a social dezadaptivity of the migrants to the climatic conditions, quality of life, old residents as a whole. Therefore, in order to not work in a famous aphorism politician "We wanted the best, but it turned out as always", the political forces in the region should be aware of the reasons that could give rise to the problem of maladjustment of migrant workers. Going to the contrary, we note that the term "social adaptation" is widely used in the social and humanitarian and chemical and biological fields of scientific knowledge, which makes a wide range of the explications of his interpretations. In the sociological perspective will focus on one of them falls into the category of generally recognized: "Adaptation (social) – is the adaptation of the individual or group to the external conditions for them, in the sociology – is the kind of the interaction between the individual and the social group with the social environment, in which the agreed requirements and expectations its members "[2, p. 12]. In the case of the disagreement the requirements and expectations of emerging social dezadaptivity.

Turning to the analysis of the reasons of the social dezadaptivity of the migrant workers want to emphasize that this is not a low-skilled workers, which, as a rule, are associated with the population of the immigrants from the southern republics of the former USSR. In the region have come to the professionals (engineers, logistics, construction, mechanics), in other words, all those professionals whose work will be needed at points of the socio-economic growth of the region.

The first reason, contributes to the social exclusion of the migrants is an *extreme environment in the Arkhangelsk region*. We present the facts. Thus, the average annual air of the temperature in Mezen Leshukonsky and negative areas: -0,4 ... -1,2 ° C, in the remaining areas - positive (0,1-2,0 ° C). In continental areas of the region of the temperature difference between the warmest and the coldest month is 29-33 ° C, on the coast a little less than 20-24 °³. This temperature can not affect productivity. In the same area is Mezenski diamond mining the V. Grib, with which management of the high expectations. The perspectives of the development of the field will depend including how it is adapted to the natural conditions of developers work. In addition, the Arkhangelsk region is permafrost, on which are mostly wetlands. These factors complicate the implementation of prioritized, since the labor in such a harsh environment requires considerable physical and emotional stress, the duration of which may have a negative impact on health.

³ The main characteristics of the climate of the Arkhangelsk region and Nents Autonomous Districts. URL: <http://www.sevmeteo.ru/files/arh-nao.pdf> (Date of access: 25.08.12).

A person can't curb nature. Such attempts being made everywhere, but they only lead to the environmental disasters and crises. The best way that can offset the cost of the physical, financial incentives will be workers. It is not just about the northern allowances, which factor in the depending on the area and the village is 1.4 and 1.2, but also the material benefits to those objects which are associated with the priorities of the region. We can also consider another option: increasing Northern coefficient pay only at the points of the growth (eg, builders Belkomur), and where no such points, all remain unchanged. Such actions will cause a positive competition among potential employees on the labor market. High wages will be accompanied by the significant extension of the criteria for the selection of the most qualified personnel from the companies who have taken upon themselves to develop priority projects area.

The North has always attracted by its financial attractiveness, and the Soviet experience in this regard to the explicit confirmation. Main goal – is to make incentives of more flexible and variable, while respecting the interests of all stakeholders, namely, the Regional Assembly members who care about the load on the regional budget, investment projects, a wave of financial risks, and, of course, experts and ordinary workers that will be their mental and physical forces to put these projects into the reality. In an effort to implement a project, whether the production of energy resources on the continental shelf or the construction of the deep sea port, we should always remember that the investment is made not only in the technology of mining and construction of industrial facilities, but also in human resources. Incentive system may actually reduce risk in adaptive migrant workers, especially at low temperatures and difficult terrain.

The second reason for the exclusion is *the quality of life in the Arkhangelsk region*. This category has a higher level of the abstraction and includes such factors as the health of the population and its demographic well-being, satisfaction with individual conditions of life of the population and the state of the affairs in the state (security of existence, access to the education and so on), the spiritual state of the society⁴.. Suffice it to give a few illustrations to make a conclusion - the quality of life in the Arkhangelsk region does not hold water. According to the media reports, all in the nursery of the administrative center of the region is about 11 000 people, and it is unlikely that in the near future the problem will be solved. You always have to consider the fact that the potential labor migrants have or want to have a complete family, in which children are an important part. The lack of places in the kindergartens will slow adaptazigenez of the workers hinder to the optimal use of their earning potential.

⁴ Kyronov U. The quality of the life. URL: http://www.kroupnov.ru/5/178_1.shtml (Date of access: 26.08.12).

An important indicator of the quality of life is the availability of housing. According to this parameter Arkhangelsk region is very seriously "slack." At the end of 2010, the total housing area was 31 million square meters, which accounts for 8.1% of the old and dilapidated housing (old housing - 7.0%, emergency housing - 1.1%).⁵ The data indicate that the dilapidated housing in the North-West region in 2nd place, only more of the Komi Republic - 7.7%. If we consider that the population of the Arkhangelsk region (without NAA) is 1,185,000 thousand people, one inhabitant of the region has an average of 26 square meters of housing. We have made calculations show that 2.511 million square meters of the housing life-threatening (dilapidated housing - 2.17 million sq. m., emergency housing - 341,000 sq. m.). And what is most important - in these homes are about 95 185 thousand people!⁶ All of these figures is threatened by the social adaptation of the migrant workers. Moreover, the livelihoods of the local population as a whole at risk. Subject to availability of housing migrant workers is paramount. In this connection, let us turn to the expert community.

JA Zayonchkovskaya, the head of the Laboratory of the Institute of the Migration Economic Forecasting, said that recently began borne some hope for an increase in the internal migration mobility of Russians: "This could pour into the economy of the additional manpower, reduce unemployment. But it does address the problem of the housing "[4, p. 5]. Judge focuses on the cost of housing, primarily urban, while pointing to the limitations associated with it (such as the inability of part-time farm in a big city).

A large area of the field and the uneven development of its regions complicate the achievement of the same level of the quality of life in all the regional space, plus the need to assess the viability and the regional budget, which basically pay the price of the social obligations of the state. The high quality of the life throughout the region is impossible, so the output is seen in dotted policies aimed at improving the lives, where there is a prevailing the social and the economic infrastructure. The choice in favor of a territory can be done, focusing on prioritized in the development of the area. Positive would be the creation of development zones. Something like this successfully in the Kaluga region, where industrial parks have become the real parks «pump» rocking the financial assets of the Western and domestic inventors The "development zone" should focus not only on the construction of an industrial cluster, but also for the construction of hospitals, schools, homes, leisure facilities around it. Want to emphasize that the quality of life in

⁵ The regions of Russia. Social –economic indicators of 2010. URL: http://www.gks.ru/bgd/regl/B10_14p/Main.htm (Date of access: 26.08.12).

⁶ The calculations were held independently on the basis of data of Rosstat and the governments of the Arkhangelsk region.

the areas of development - is not a concern of the state, but also the structures that have the right to use the area as their capitalist order (in this case a prime example is the city of Norilsk). The Union government and the private sector - is the only way to support the socio-economic optimum development zone. In our view, perspective sees its creation in Plesetsk near Arkhangelsk region around the village Severoonezhsk where the largest reserves of bauxite (according to the same concept of socio-economic development of the region until 2030, their stock is 18% of the Russian reserves), forests, is production of basalt, in addition, the village has the rail connections.⁷

Thus, in light of the development of the Arkhangelsk region need to take care of the social component. This will help reduce the likelihood of the destructive processes in the adaptatsiogenez of the migrant workers and ensure the mitigation of the negative factors that affect the efficiency of their performance.

Finally, the ultimate cause of the social exclusion is the opposition of "we" and "them." This distinction between the good of the analyzed using of the sociological optics. British sociologist Zygmunt Bauman writes, "we" and "them" - it is not the definition of two separate groups of people, and the names of the differences between two very different relationships: emotional attachment and aversion, trust and suspicion, security and fear, sociability and quarrelsome "[1, p. 46]. Arriving in the Arkhangelsk region, the migrant workers must be prepared for the negative attitude of the old residents of the region. If we turn to the history, many migrant workers coming to the North in order to work and earn good money, stigmatized by the local people as "grabbers", "zagrebaly", "crooks." Opposition to "us" and "them" is the feature of any society. They - the ones who came not clear where, in order to deprive the income of a local resident, to take away the allotted him by birth in the territory workplace. This feud has played an important role for the maintenance of the identity, a sense of solidarity, common on both sides. Sometimes conflict can force their way out, putting stress the entire social structure. Events in Kondopoga (Karelia) is well illustrated by the situation. This problem is very complex, so only limited financial decision is not productive. Need a complex job as the local social environment, and with the coming of the migrant community. Some hope can be blamed on the media and expert community. First, introducing the second opinion may have a positive impact on the local community through their own channels of the communication. Should be included and the regional administration. Must convincingly show all interested reasons, benefits and expected outcomes of labor migration in the

⁷ Nazarenko A. P. The Arhangelsk Region – a demographic catastrophe on the way? / Sourcebook of arctic summer school 2012. NARFU. Archangelsk, 2012.

region. Able to make a contribution and educational institutions in terms of developing a sense of tolerance to the population trapped the migration mobility.

Arkhangelsk region is in the continuous demographic crisis. This, in turn, has a negative impact on the economy of the area. In this situation, the output seems to attract the flow of the highly skilled migration. However, a new problem – is the social dezadaptivity of the migrants. This is facilitated by three factors: the natural conditions of the Arkhangelsk region, the low quality of the life in the region, negative attitude to everything else from the local population. Eliminate these factors is impossible, but to reduce their destructive effect is quite capable. In conclusion, I will add that migration mobility - is a natural process, and in the future it will only grow.

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Indigenous people of the North in the Arctic area of Yakutia: geo-informational research of the settlement in the XX century



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Abstract

It is showed the dynamics of the number of the indigenous people of the North of Yakutia, according to the lists of the Population of the twentieth century and it was constructed the maps of the settlements with GIS technologies.

Keywords: *indigenous people, GIS technologies, Yakutia.*

This article presents the preliminary results of the project RFH № 11-01-12004v "Creating a GIS" Resettlement of the Indigenous Peoples of Yakutia in the first half of the twentieth century. "The objective of this project is to study the geographical features of the resettlement of the indigenous people of Yakutia by the creating a geographic information system for the decision support and the optimization to preserve the traditional land of the indigenous population. The main object is the system developed GIS settlement of the small population of the North Yakutia, which is the basis for the preservation and the development of their traditional land. Established GIS will help in the solving the land interests of the small population of the North, on the one hand, and the industrial, transportation agencies, on the other. This GIS will also apply the modern cartographic methods of the research to determine the laws governing the formation of the resettlement of indigenous peoples of Yakutia in the twentieth century and to identify changes in the areas where they reside during the study period. Established GIS will help to harmonize the various sources of information (statistics, maps, history, etc.) for the reconstruction of the system of settlement of indigenous people of Yakutia in the first half of the twentieth century.

According this project of the instrumental geo –informative mapping tool allows to:

- ✚ accumulate information about the resettlement of the indigenous people;
- ✚ Identify the territory occupied by the indigenous people and analyzed their spatial variations;
- ✚ derive synthetic cartographic images associated with the component and integral database.

Also geoinformation mapping can be an effective method for studying the resettlement of the indigenous people of Yakutia, which will allow harmonized and common methodological prin-

ciples to create different time thematical (and integral component) map-layers and then using overlay operations, derive map-layers showing qualitative and quantitative changes. This implies that the GIS mapping for studying the dynamics of the territorial distribution of the indigenous peoples of Yakutia.



In the first phase of the geoinformation mapping the dynamics of the settlement of the indigenous people of Yakutia, which was developed GIS structure, consisting of attribute and spatial data. The main sources of information for the developing attribute databases, which are the documents of the historical statistics, archival records and published sources, spatial data - raster and vector maps.

For GIS-mapping resettlement of the indigenous people of Yakutia have been chosen and created the general geographic framework scale 1:15000000 card settlement in the context of ulus (district) and 1:2,500,000 card settlement at the community level. Choice of data scale due to the fact that they are traditionally used for the thematic mapping the entire territory of Yakutia. It is in these scales created practically all open cartographic works Yakutia, which allows comparing the information presented in them.

Using the information, entered in the attribute data in the selected general geographic bases created various times thematic layers resettlement of the indigenous people of Yakutia. Before the introduction of the thematic layer, many materials were pre-treated (reduced in scale, projection), and if necessary - is typology and the graphic generalization due to over-detail maps of the source. Thematic map layers are created as by pre-selected maps, the content of which are wholly or substantially meet the requirements of the project, and on the basis of cartographic synthesis of dissimilar materials, the content of which is original and has no analogues.

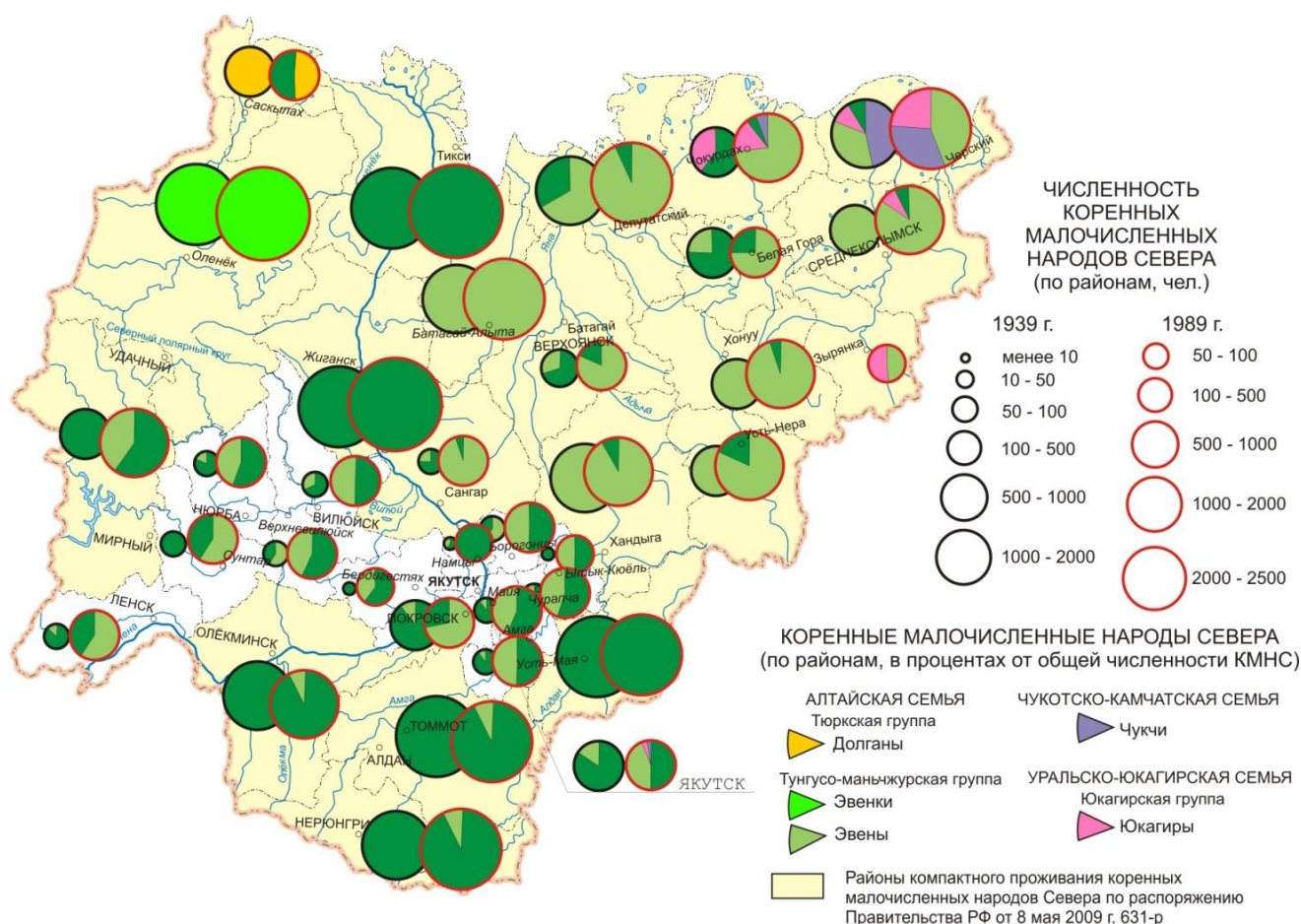
A dynamic approach to the study of the spatial distribution of the indigenous people of Yakutia is implemented in the transformation of the heterogeneous information sources and the different times in the same type of the resettlement geo images, accompanied by the same type as the attribute information for the specific time slices (in our case - the census) with further combination and chart analysis.

During the GIS research of the resettlement of the indigenous people of Yakutia in the twentieth century are used the following principles:

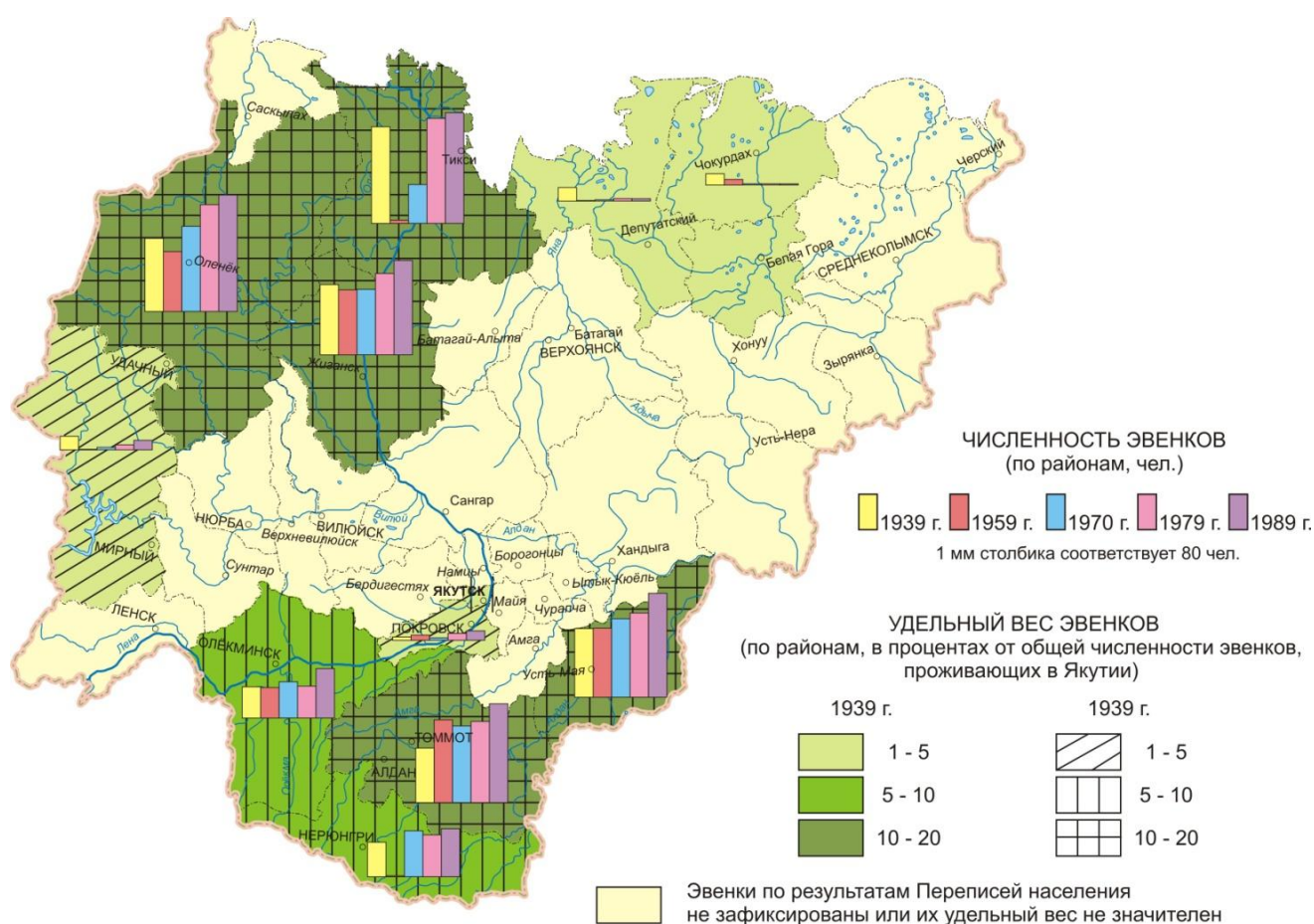
-  use of a single digital single-scale of the general geographic basis with layers: the hydrographic network, terrain, borders, settlements, etc.;
-  the preparation of multi-thematic layers (settlements, population size of settlements, the number of the minority ethnic groups, ethnic composition, etc.);

- ✚ the application of the common standards in the creating generalization of multi-layers on the same subject;
- ✚ the application of the common quantitative measures and qualitative traits in the formalization of information about objects in the listing on the thematic layers and database;
- ✚ the use of GIS mapping for extremely wide range of competent and reliable sources of information (mapping, statistical, descriptive text);
- ✚ the application logically sound, expressive, easy to read and comparable graphics tools (for point objects - icons by shape, color and size, for landfills - polygonal characters on both qualitative and quantitative color scales, and for linear objects - linear character of shape, color and size).

On the basis of the above principles and the population censuses in 1939, 1959, 1970, 1979, 1989, 2002 and 2010, we made a map showing all the resettlement of the indigenous people, who are living in the territory of Yakutia, and their individual representatives - evenkov, evenov, yukagirov, chukchi and dolgan in the scale 1:15000000, examples of which are shown in the figures 1 and 2.



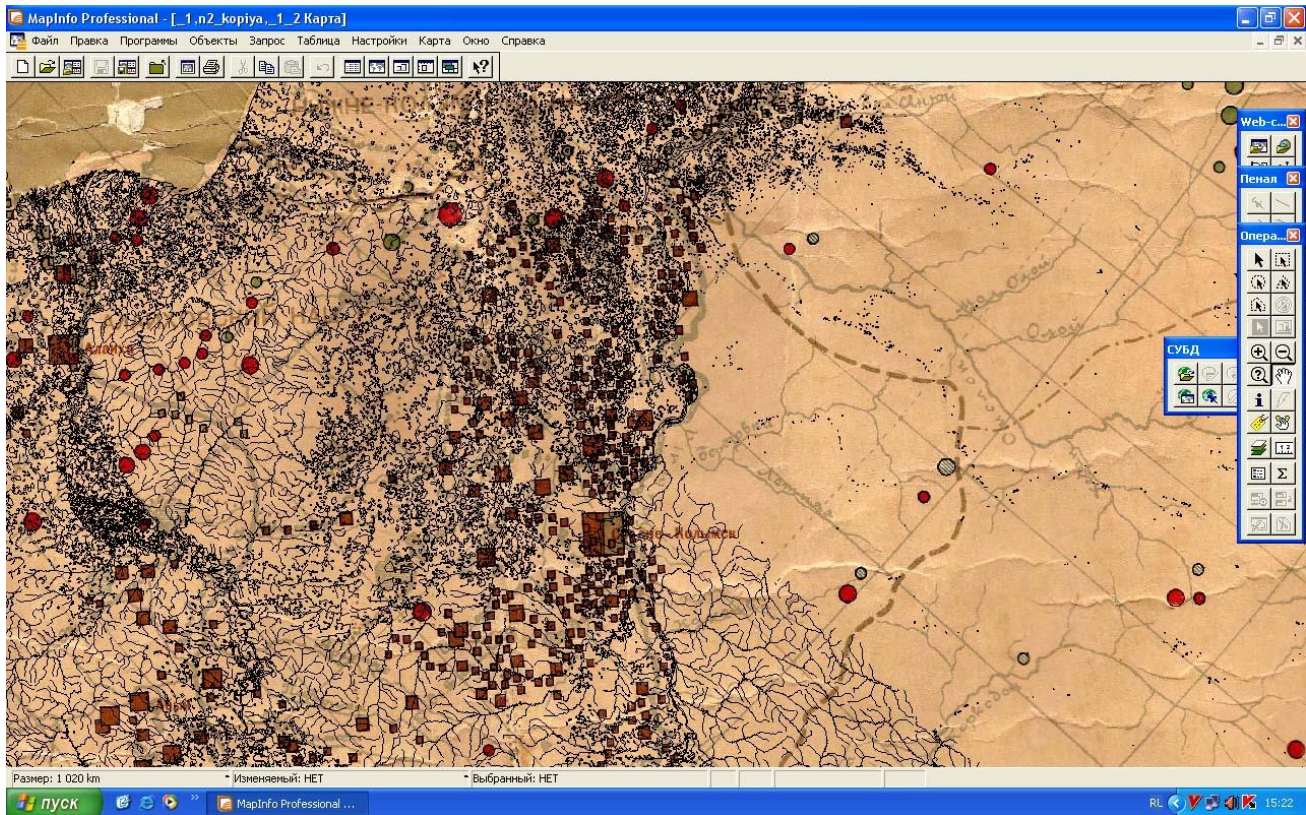
Picture 1. The resettlement of the indigenous people of Yakutia, according to the censuses of the population in 1939 and 1989



Picture 2. The settlement of the Evenki in Yakutia on the census data of the population

The main aim of this project is the reconstruction of the resettlement of the indigenous people of Yakutia at the first half of the twentieth century, at the community level. As an information source to bind communities living minorities of the North Yakutia map chosen different time cartographic works representing raster mapping ensuring created GIS and primary materials census in 1927 and 1939, collected in the National Archives of the Republic of Sakha (Yakutia), the State archives of the Russian Federation, the Russian State Archive of the economy.

On the basement of the synthesis of the collected archival, statistical and cartographic data reconstructed the resettlement of the indigenous people of Yakutia in the first half of the twentieth century in the form of the thematic maps made on the scale 1:2,500,000 (Picture 3).



Picture 3. The combination of the raster and vector layers for the reconstruction of the settlement of the indigenous minorities of the North of Yakutia in the Census of 1926-1927 period. The section of the map scale 1:2,500,000

Developed according to the project the information system and created a series of the thematic maps can be used by the researchers who study the territory of Yakutia, and researchers in other regions of the indigenous minorities of the North.

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Economy, Management

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Formation of the transport infrastructure of the Russian sector of the Arctic in the XXI century¹



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Abstract

Large-scale of the economic development of the North and the Arctic zone of Russia must be preceded by the establishment of the transport frame, consisting of two latitude and six radial strategic railways. For the possible effective interaction between different modes of transport only in the north of the country should be established (or reconstructed) to ten major ports, which may be the key hubs in the development of the Arctic. These sites should be focused on the state logistics centers. Forming the base of the transport framework creates opportunities for accelerated and efficient development of thousands of large mineral deposits in Siberia, the North and in the Russian Arctic.

Keywords: *geopolitics, transport, Northern Sea Route, the optimization, the North of Russia and Siberia, strategy, nodes, networks, logistics centers, the transport frame.*

The transport development of the Arctic zone is the key to the implementation of the strategic plans of Russia for the commercializing of the huge natural raw materials and other economic resources of the Arctic, as well as the use of the advantageous of the geopolitical location of the country and the transport potential of the Northern Sea Route (NSR).

It is obvious that the solution of this problem in the XXI century (especially in the first half) will be given increased attention, which, in turn, will not only expand the scale of the economic activity of Russia in the North, but also increase the credibility of our country and its influence in the world community.

Transport development of the North of Russia (Sub-Arctic and Arctic regions) and the creation of the large-scale production is to be seen in the unity of the aspirations, together existing efforts to build the expanded transport infrastructure of the zone, functionally and economically closely related to the existing transport network of the country. Formation of the transport infrastructure of the North Russia should implement the program consistently, gradually forming and

¹ References on the published works of the authors, in which he refers to other sources.

developing all components of the system, rationally developing all forms of the transport, consistently increasing capacity and carrying capacity expandable transport and increasing the power of all the basic infrastructure components.

The formation of the expanded Russian transport infrastructure in the Arctic requires consistent programmatically create transportation resources with the maximize benefits of the different types of transport, organizing centers where they are based, as well as nation-wide approach to the logistics of cost-effective use of the transport potential of Russia in this area.

The principles of the formation the transport infrastructure of the North

The key to the formation of the transport infrastructure of the North of Russia should be the use of the most important principles of the effective state of the economic development:

- ✚ development and optimization of the transport networks and the transport resources (capacity) of the traditional type (species), which are basic to the development of the North: the railway and road, sea and river transport, and air (aircraft, helicopter and balloon directions), are under increasing pressure to the process of the economic development of the northern territories;
- ✚ Database optimization of the placement transport transportation resources in the Russian Arctic zone, logistics in the connection with the problems of the economic development of their increasing both in the aggregate and for the individual transport modes. To optimize the costs of the creating and efficient use of the transportation resources created in the north of Russia should be a unified state (not corporate) the logistic system with branches in the key transport hubs. Obviously, in the north along the Russian Arctic coast (SLO) is to be created up to a dozen of these strategic transport hubs, combining the traditional forms of the transport: sea, river, rail, road, air, and new or well-forgotten old modes of transport, such as pipelines for the transport of dry cargo and solid, capsule-container-transportated. Naturally, piping chilled and liquefied natural gas (LNG and OPG), termoplany, ekranolyots (ATLA) recent, modern the modifications, nuclear-powered vehicles (Apts), and others currently in the use and emerging types of the traffic reports [4, 8, 15];
- ✚ optimally effective, efficient use of the advantages of the different types of the transport, depending on the scope and objectives of their application: inter-regional and inter-state transport of the cargo transportation with the distances of more than 1 thousand km, intraregional (mostly inter-farm) and local, mostly-internal [12, 19];
- ✚ establishment of the strategic transport hubs of the Russian North unified the state logistics centers, as only they can conduct policy lowest-cost and the most efficient use of the existing

transport resources and benefits of the different types of the transport in some basic areas of the transportation hubs, and in general all area of the northern zone of the country. Already, at the beginning of large-scale development of territories and resources in the Arctic, it is clear that in the Far North importance of this factor increases dramatically [29, 30, 32];

- ✚ Ensure the environmental cleanliness in the transport development of pre-Arctic and Arctic areas of Russia [14, 17, 24, 27].

Compliance with the above principles in the field of the transport development of the Arctic zone of Russia from the standpoint of the public logistics will, in my opinion, to ensure the minimization of the costs, and therefore reduce the cost of a private investment and government spending in general, the development of natural resources and raw materials in the Arctic:

- ✚ ensure the minimization of the investment in the creation and further modernization and expansion (development) of transport resources;
- ✚ the minimizing of the material costs for maintenance of the transportation facilities and the implementation of the transport operation;
- ✚ minimization of labor, material and energy costs at all stages of the implementation of the strategic plan (program) of the transport development of the North and the functioning of the entire transport system of the Russian North in the technological unity with the other parts of the transport sector of the country.

Obviously, to the state program of the development of the Russian North, despite the presence of the individual sections (areas and the use) of each mode of the transport, the activities of each of the stages of the development of the transport sector in the North of Russia provides logistical coordination maximize synergies and complement other modes of the transport in carrying out the functions of the transport development of the territory, accessibility. The implementation of all types of the transport operations should be carried out with maximum efficiency and at the lowest cost, of course, providing the optimal timing of delivery and the absolute safety of delivered goods as well as trouble-free operation in transportation systems in harsh Arctic conditions is essential [29, 30, 32].

The practice of the previous decades of the development of the Russia Arctic zone indicates that no permanent, independent oversight, of which under the present conditions could control the space, it is impossible to manage. And, therefore, in the expected community-based integrated program of the development of the transport infrastructure of the Russian North, without a space, a permanent monitoring system is indispensable. Technically, this is not difficult, in part because the task is solved by our astronauts and the Russian Space Forces features include an option and maintain order in the Arctic zone of the Earth. [32]

Another thing is that this function should be part of a permanent public space monitoring of the business processes in the north of the country, including the transportation component in the process of developing the resources of the Arctic zone. First of all - on the assigned territories to Russia. Although we are very important to know what our neighbors and partners, as appropriate, or providing them with appropriate assistance, or acting preemptively, preventing possible adverse, hostile actions by third countries and companies against Russian enterprises and citizens of our country.

In our view, the most rational creatures mentioned above the strategic hubs and placing them in the public logistics centers in the Northern Russia in a place where the main transport routes converge - the main modes of the transport. Today it is the ports at the mouths of the major Russian rivers Ob, Yenisey, Lena and others, partly marked by us on the map (Figure 1). Evidence that:

- 1) First, there can be also deployed air communications ports;
- 2) Second, in these source areas may start road construction, that is, over time, an ever larger scale may be involved motor vehicles;
- 3) Third, it is expected that over time, the data node will approach the railway, which is also indicated on the map are;
- 4) Fourth, it is possible that these hubs will be used as staging bases from its appointment of pipeline systems for other types of transport. It is natural that our thoughts and logical construction of the scheme is only one of the possible transport setestroitelstva in northern Russia.



Picture 1. The scheme of the understanding of the future carcass if the transport infrastructure of the North of Russia

The logistics of the railway building in the North

Many years of the large-scale practice in the development of the global Russian north indicates the dominant role of the railways in the creating the conditions for the further development of the natural resources and raw materials of the transpolar territories with a large amount of the products and a significant turnover. In this regard, we believe that the XXI century will be a century of the unprecedented development of the railways in Russia, bringing together the work of all other modes of the transport and of the economic spheres. Usually transported by rail cargo relatively low cost coal, oil in limited amounts, insufficient for the construction of oil pipelines (or at the very beginning of the development of large oil and gas fields), food, farm, forest, and other cargo, cargo building industry (cement, brick, rubble, concrete products, etc.), without which normal functions of newly established production centers and settlements.

And, as a rule, the larger the newly created productions, the more manifest appear the necessity of combining these centers with the existing transportation network of the railways of the country. Thus, the creation and the development of the more Pechora coal basin in the Komi Republic (DO) were impossible without running Pechora (now - North) railway. Development of the large oil fields in Kazakhstan Usinsk area caused the gasket in the area of the branch of the Northern Railway (station Synya). The decision to create in the early 60's in Syktyvkar large timber industry (AGTC) for construction of a branch from the Northern Railway (station Mikun) to Syktyvkar. A similar objective pursued, when they started to develop a unique, mainly pine, forest resources of Trinity-Pechora area (RA), hoping in the future to continue this railway to the South Urals (the station or stations Midnight Solikamsk. At present, both of these options are strategically interesting, perspective for the consideration.).

Obvious that the concept of the Arctic transport must lie the idea of the forming strategic reference framework transport, creation and development at its base transport infrastructure of the Sub-Arctic and Arctic areas of Russia, working in unity with the logistics nationwide transport network.

The upcoming large-scale offensive in the extreme north of the country and prepare for the development of the Arctic territories and resources of the Arctic Ocean is not possible without the creation of a support network of railways in the northern part of the country. Forced us back to the idea of the leading theoreticians of the transport development in Russia (N.N. Kolosovsky, N.N. Baranskii, etc.), which in the early 40's presented logically arrayed to create a grid of main railways in Siberia and the Far north as a key element of a transport development of the huge northern territories. Their ideas are relevant to the present day.

Considering the desire in the near perspective, to large-scale development of the Arctic zone of Russia, we are obliged to return to the idea of a strategic transport framework, able to phase out the comprehensive development of the economy here, around the clock delivery of large volumes of goods in both directions (to and fro), reliable, all-weather, versatile and relatively inexpensive. Those of the Russian scale, especially in the North, were and remain the rail [5, 15, 18, 29, 30, 32].

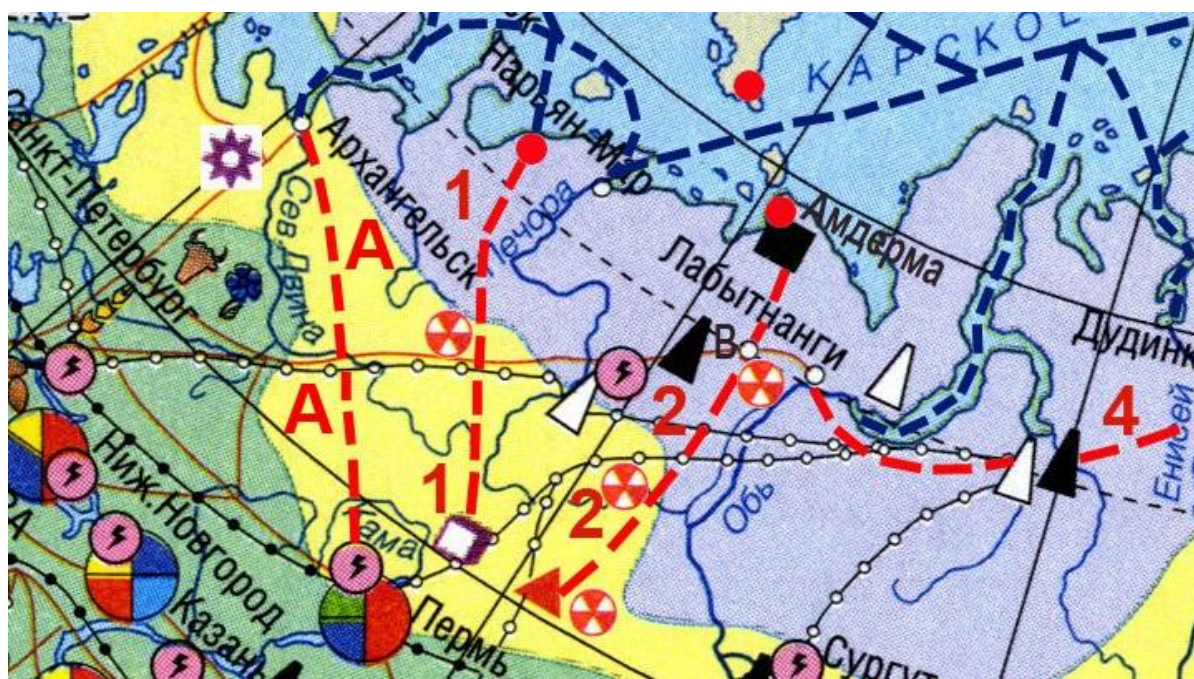
Formation of the rail transport in the framework of eight dedicated and we examined arteries [30] allows you to organize the most effective medium of the courts, driving and transit route along the Northern Sea Route through the Arctic over latitudinal, river transport on the largest northern rivers Pechora, Ob, Yenisei, Lena, and are in the process of economic development in the Arctic zone of the other modes of the transport.

We present a brief description of the strategic and key rail lines required to form a transport cage in the northern Russia, the construction of which has already been partially included in the long-term plan of the railway transport in Russia in the first half of the XXI century, in the near future could become the most important part of the railways of Russia, aimed at the development of the natural resources of the Far North, Siberia and the Arctic.

The railway building on the North of the European part of the country

In the European part of Russia, the key for the upcoming large-scale attack on the Arctic, in our opinion, for the future of the transport infrastructure of this area are beyond the existing three railway line (Picture 2).

The most important and therefore the priority is the construction of highways linking the Urals, the Komi Republic, Port Indigo (Indikomur), which allows to organize the shortest path to the exit in the Arctic Ocean to the shipping lanes of the Urals, Siberia, Central Asia, and if need be, and our eastern neighbors: Kazakhstan China, Korea, Mongolia, Japan, etc.



Picture 2. The west wing of the transport support frame of the Russian North: 1 - Indikomur 2 - West-Ural Railway (ZOOM) A - Belkomur (White Sea - Republic of Komi-South Urals) B - Vorkuta (industrial and transport hub, connecting with ZOOM SZ)

In addition to the factors on which Indikomur in the European part of the country, there is no competition (in the part to the creation of the Western-Urals line (ZOOM)), this line allows you to organize the transportation to export up to 3.4 million tons or more per year of potash produced in Solikamsk largest salt panning Enterprise country, and to provide the export timber cargo volume 2.3 million tons or more, the deposits of which are south-east of Kazakhstan is the leader (of forest resources in the 100-km zone of the line is 2-2.5 times higher than same figures for today is the project Belkomur). On the highway today Indikomur potentially oriented transport more than 10 million tons of other types of cargo a year. With the development of the economy and of the export potential of the surrounding area and thus the growth of the foreign economic relations (WEC) with Europe and Asia Indikomura importance will only grow.

In addition, this line passes through the Timan Ridge, which has one of the world's largest reserves of bauxite, titanium ore, and in particular Yaregskoye Pizhenskoe field already a significant part of export-oriented, as well as large reserves of the minerals.

Among the distinguishing characteristics of the highways «Indikomur» and it should be noted, that the positive create favorable conditions in the Bay Indigo diversified sea port can accommodate vessels with deadweight of 5-10 times higher than it can provide limited by many natural and technical parameters of the Arkhangelsk sea port. Moreover, the extent of sea routes from indigo in western Europe in 600 km shorter, and the countries of East Asia - more than 1000 km (compared to Belkomur). Indikomurs highway is of great national importance for the future of not only Russia and the Arctic, but much more - for the economic development of Kazakhstan. About the same as in the late 30's construction in the Pechora region (North) railways.

In recent years, much is written and said about the need to build a Western-Ural Railway (ZOOM). Lying of the pipeline in the vicinity of the Ural Mountains, of course, complex and costly engineering construction, but the prospect that opens for Russia this line, gives us the confidence that its construction will begin in the next few years. The most important advantage of its creation is the appearance of a particular approach to the thousands of railway open in the Urals near lying ZOOM possible deposits of the valuable ores and minerals development will dramatically reduce the deficit in many minerals, not only in Russia but also in the world that will give a significant

boost to economy in this region of Russia [15-17, 19]. In addition, the highway ZOOM creates another shortest route to the ports Amderma, Khabarovo on the Northern Sea Route and in the priority areas of the development of the Arctic zone of Russia, consistently expand in the future. Create line ZOOM is particularly promising in the case of the expected large-scale development of foreign economic relations (WEC) with the countries of Asia and America.

According to all the shortcomings of hard and not always wisely and objectively impose-my today Belkomur this construction can not be excluded from the perspective and with significant inter-regional importance for the economic development the European part of the country and for the whole of Russia. The importance of this route is that it would create Danie at 600-800 km to shorten the length of many types of cargo transportation, call (Indikomura in these figures are much higher) from areas of the Southern Urals and Povol-husbands, and from Siberia and eastern countries focusing on areas of Arkhangelsk, Karelia, Kola peninsula. With the creation of Belkomur timber about a quarter of production from Kazakhstan and about the same from the Arkhangelsk region will transport output for processing the Archangel promtsentre and for export. A more in-depth study of geology near the highway Belkomur territories can use to organize the production and processing of deposits developed here.

Alternative comparison through SWOT-analysis of the negative aspects of the overactive now promoted highway construction project of this world has represented the country's leadership for the consideration. In our opinion, is not complete and not always in a professional and effective manner of the conceptual idea of building Belkomur and rationale. It seems that the most effective, absolute arguments in favor of the construction of the highway developers missed it, causing it to all key parameters inferior to its main competitor - the construction of a highway project Indikomur.

Transport axis of the North of Siberia

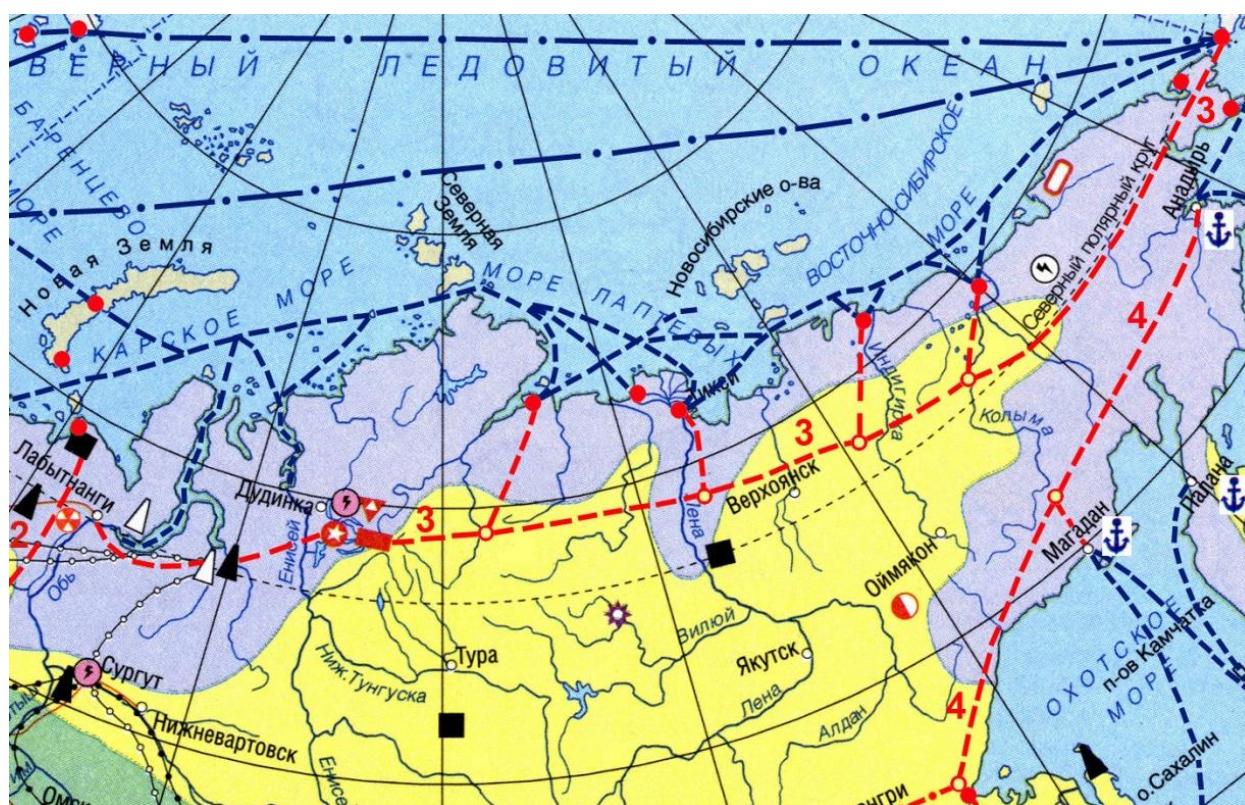
The formation of the core transport network of Russia in the northern part of Siberia (up to Chukotka) is even more technical and engineering complexity and even more technical difficulties for the implementation of the project (climatic, permafrost, geology, the need for hundreds of river crossings, lack of building materials and scrap etc.). This was one of the major reasons for the rejection of the original version (in the early days of railway transport in Russia in the 70's of the XIX century), the Trans-Siberian Railway Station Birch (district center in the north of the Tyumen region) in the eastern direction through Yeniseisk and Yakutia to sea of Okhotsk [29].

The other (which happened at the time more meaningful and logically this is understandable) reason to change the original plan to build the Trans-Siberian Railway and laying it over Tyu-

men, Omsk, Novosibirsk, Krasnoyarsk, Irkutsk, Chita, and so on, that is now the existing route, were the demands of the merchants and Industrialists (within the nationwide referendum) to connect existing major industrial and commercial center of the southern part of Siberia, the shortest and reliable transport route.

Even with the current position can be justified by the then decision rail referendum on the changing of the original version of the Trans-Siberian Railway (TCM). This decision was justified and strategically and economically, because in addition to solve this problem, this highway was built in about half the time, and its construction cost is much cheaper than it would cost the then building originally planned Trans in late XIX - early XX century.

With the increasing attention of the leadership of Russia to the economic development of timber, petroleum, fuel and ore resources of the central and northern parts of Siberia and the imminent onset of the economic scale in the Arctic, the interest in the construction of highways transpolar (Polyarsib) increases dramatically. Especially, when you consider the prospects and the complexity of the economic development of the Arctic Ocean and the growing appetite of many countries to create their own databases for the extraction of raw materials in the Arctic Ocean. In Picture 3, the number 3 marked the possible passage of the highway, state, economic and geopolitical importance of which in modern terms would be no less than the construction of Trans-Siberian Railway in the late XIX - early XX century.).



Picture 3. The northern part of the transport of the reference frame of the Russian North:
3 - transpolar line (TMP), 4 - trans-Pacific line (TTM)

Trans Polar Highways (revival and a new quality of 501 building, begun in 1946 on the personal instructions of Stalin), comparable in importance to the construction of the Trans-Siberian Railway in the late XIX - early XX century, and taps her for the most important seaport on the Arctic Ocean to create a key element of the transport infrastructure for the subsequent development of the Russian Arctic.

Logical view of our future transpolar route line for many reasons: first, the north will take this line, the more expensive it will cost (approximately two to three times or more), and secondly, economically sound is the direct involvement of the transport resource line 150-200 km in the economic development of the adjacent territories, creating a basic transport corridor, it becomes possible to capitalize in the area of other modes of the transport (rail access, roads, pipelines, etc.), and thirdly, the exploitation of the railway each one hundred kilometers to the north of her departure will cause a 15-20% price increase. Although an exception in specific cases despite the economy, for political and strategic arguments (primarily dictated by the interests of the national security - this has already been observed in Russia) may be some deviation from the route of railway construction economically optimal option.

As indicated above, the laying of the transpolar pipeline will help in the immediate vicinity of the (150-200 km) to create the large industrial enterprises, which may be serious shippers and consignees, which will increasingly load line and make it more cost effective. Actually, it was not only in Russia but also abroad. Obviously, there will be development of the areas along the corridor with TBI. The creation of enterprises will be launched already in the process of the building the backbone, other raw materials, which in complex will be developed in the coming years. It will take at least 20-30 years to transpolar highway was built and loaded "to capacity", that is in accordance with the design capacity.

It is assumed that from SST to existing and newly built seaport, which located mostly at the mouths of the great Siberian rivers, the branch will be made, which will create conditions for the formation of these ports, major transportation hubs and logistics for effective management of which has no analogues in the world by the capacity of the transportation resources, Russia's transport infrastructure in the Arctic zone of the world.

In Picture 3, we are supposed to access the roads to existing Polyarsiba (Tiksi, Dixie Pevek, etc.) and proposed the marine ports, which can be a conduit of the goods to rail and river transport by sea and vice versa. These ports, in our view should be the major transport hubs, is combined with the positions of state logistics of transport resources as other modes of transport (river, pipeline, road, air, etc.). Here, we believe, should be placed nodal logistics centers, allowing

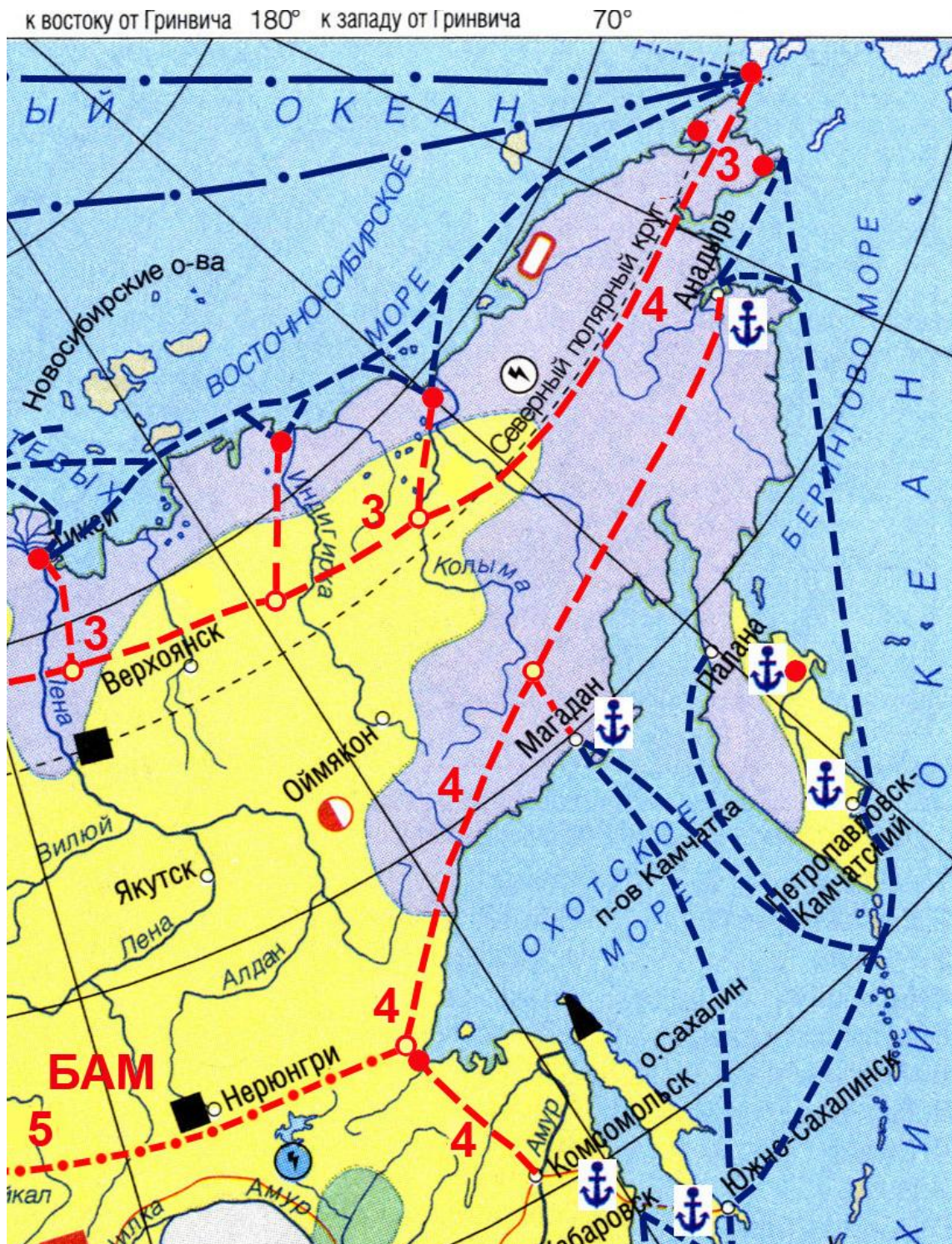
for the most cost-effective schemes to organize transportation of cargo (and passengers), the most of the advantages of using all modes of transport.

Railway construction in the Far East

Another strategic challenge for Russia is to build trans-Pacific Railway (TTM) from the Bering Strait to the junction with the Baikal-Amur (BAM) and the Trans-Siberian (TCM) highways. The idea of the creation of the railway lines are being hatched over 100 years. On a possible route TTM already passed dozens of the topographical and the geological expeditions, parallel studied natural raw materials in the 300-kilometer corridor, which revealed, and in many fields to protect the state reserve a number of minerals (SRC). But even with incomplete data routing of the pipeline will create in this part of the Far Eastern zone of the country and 100 major mining, processing and service enterprises, the output of which the design capacity of the gross regional product (GRP) of the adjoining area to exceed the current TTM gross regional product of the Ural Federal District.

Creating of the ***Trans-Pacific Railway (TTM)*** not only guarantees the reliable transport connections in the vast territory (more than 2 million square kilometers), but at the same time allows to begin the development of the thousands have already explored in the area of the mineral deposits, as well as improve public safety of the eastern borders of Russia.

In addition to the purely economic factor of the economic development of this area, allowing it to withdraw the 10 largest industrial areas of the country, this line has a huge military-political and strategic importance, because it provides a reliable, year-round and lifting transport corridor for more than three thousand miles the Pacific coast, able to take (and cost effective) over most of the freight and passenger sea transport, whose work is complicated in the winter and often require the inclusion in its provision icebreakers. Obviously, in a reasonable distance from the highway, in coils, enabling the relevant conditions can be created major sea ports, some of which we logically presented in Picture 4.

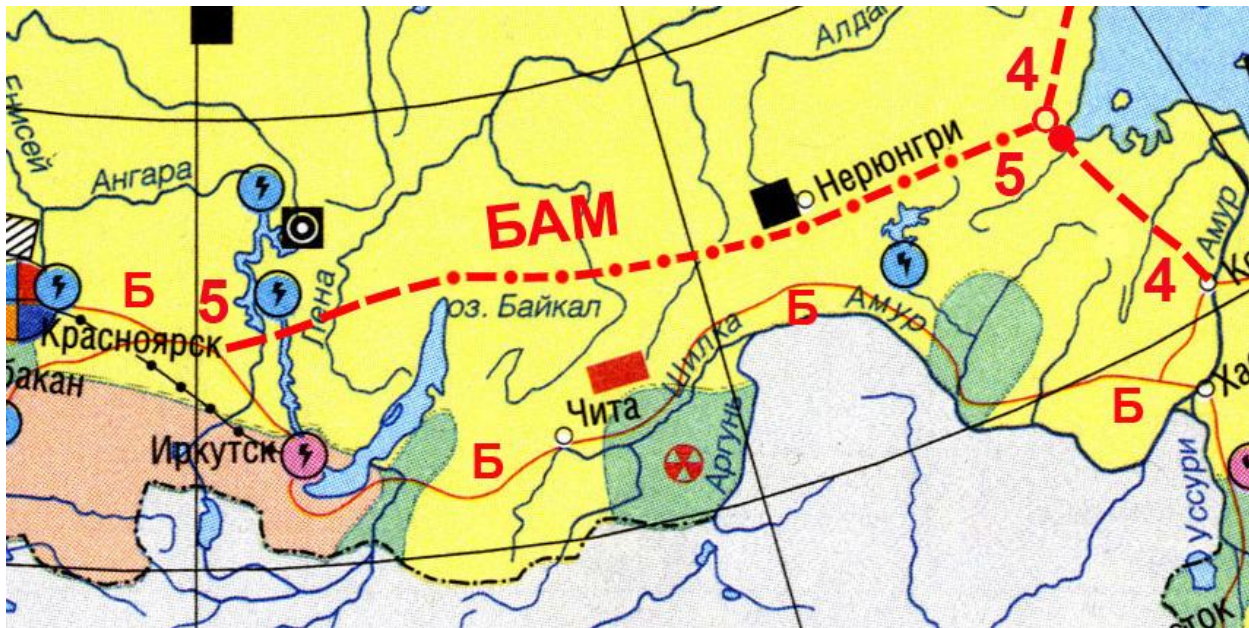


Picture 4. The Eastern and the South-Eastern component of the transport frame of the Russian North:
 3 - transpolar line (SST), 4 - trans-Pacific line (TTM)
 5 - The Baikal-Amur Mainline (BAM)

At the beginning of a market adjustment in Russia, but rather in 1993, was deployed active work of the American side to accelerate the construction of the TTM, there was even a Russian-American Association for the establishment of the highway, but then due to some circumstances conversation ceased and already prepared materials were on the shelf. Obviously, should now go back to the idea of the construction of the TTM and revisit the prepared materials to a changed

environment, and the world situation, and due to an increased focus on the development of the Arctic. Create TTM combined with TBI will attach to the process of economic development more than 2 million square feet. km of the northern territories of Russia, approximately equal in the European part of the country.

Considering the economic map of Russia in the first half of the twenty-first century, it is impossible not to draw attention to the growing role of the Baikal-Amur Mainline (BAM) (Figure 5) in the economic development of the Far East.



Picture 5. The southeastern part of the transport frame of the Russian North:
 4 - Transpacific Railway (TTM), 5 - The Baikal-Amur Mainline (BAM);
 B - the existing of Trans-Siberian Railway (TCM) (TTM);

Bringing the highway up to the design capacity will solve a number of the strategically important for the country's problems: first, to engage in business turnover of the dozens of already discovered in its area of the adjoining mineral deposits, thus creating another powerful industrial area, and secondly, significantly relieve the current Trans-Siberian Railway, and thirdly, to create another parallel to the Trans-Siberian function of the powerful transport complex, located at a considerable distance from the border of Russia. In this century, to grasp the significance of the BAM for Russia to bring to mind and create a parallel to the existing Trans new strategic transport access to the Russian ports on the Pacific coast, have substantially protect the south-eastern part of the Russian Far East territories for the possible military conflict.

Transport development of the Central part of Siberia

The formation of the main frame of the transport of Siberia and the Far East suggests that after (or even parallel) is the creation of the world maps on the major highways will be the process

of the connecting the Trans-Siberian (acting), and is being built transpolar (Polyarsib) lines by pro-laying meridian strategic railways. For example, one of the first such trails expected laying of the railway from Krasnoyarsk to Norilsk. The idea of building this road belongs to P. Zavenyagin (the first director of Norilsk Mining) and naschi account the more than 80 years, that is, the idea arose immediately after the start of the construction of Norilsk Mining and Processing Plant. The first project of this line was produced in the late 30's, but the outbreak of World War II pushed chalk out plans for its construction. Next return to the idea of the construction of the highway (and preparation) is the end of the 70's, but for a number of the circumstances, and then came the era of the market "reformation" idea of the construction of this road was again postponed indefinitely.

At about the same situation is the idea of laying the railway to Yakutsk Transsib (Picture 6) and then to Aikhal and Mirniy (leading center of the domestic diamond excavation) to connect to Polyarsibom (transpolar routes). The idea of laying of the pipeline, which occurred shortly after the discovery of L. Portugalova "peace pipe" - the first Russian diamond pipe at Ayhale. Currently, the idea is gaining support supporters of the construction and, to our knowledge, is already design order.

The construction (obviously parallel) of the strategic radial railways (Yakutia, Krasnoyarsk, Ob) completes a support rail network in Siberia and organizes the access to the development of many thousands of the fields in the vast territory from the Urals to the Pacific Ocean (over 10 million sq. km.).

The creation of the transpolar, transpacific and of the three super powerful meridian lines: Krasnoyarsk (in Norilsk and Yakutsk), and in the subsequent line of Obskoy highways and from Surgut and up to Obskaya Guba to significantly accelerate process of the economic development of Siberia. Simultaneously with the formation of a powerful rail transport exist a framework creating favorable conditions for the further development of a modern transport infrastructure of the North, Siberia and Far East of the country, there will be conditions for consistent and more of the large-scale development of the Arctic resources.



Picture 6. The scheme representation of the future framework of the transport infrastructure of the North of Russia
Symbols: — existing railways; ■ ■ ■ — projected railways; ● — Railway terminals; ○ — Sea ports (hubs). 1 — Indikomyr; 2 — Western-Urals Highways (WUH); 3 — Trans-polar highways (Polyarisib, ТПН); 4 — Trans pacific-oceanic highways (TTM); 5 — Baikalo-Amyrskaya highways (BAH); 6 — Yakytskiy highways; 7 — Krasnoyarskiy highways; 8 — Ob highways

Geopolitically, forming the base of the transport frame in this mega (North, Siberia and the Far East), allowing it to serve as a platform for consistent, economically and politically sound scale offensive in the Arctic, where all the economic power of Russia will focus on consistent, large-scale economic development of the mineral resources of the Arctic zone.

Infrastructure elements of the transport complex of the North of Russia

A key element of the most important part of the economic development in the Arctic zone of Russia is the transport infrastructure, represented by all available and newly created modes. Here, more than ever need cost-effective, not only nationwide logistics transport development, but also a direct interaction between all the modes of the transport within the zone boundaries of cost-effective use of each of them.

Obviously, in the Arctic region, there is no place now emerging and prevailing in the country of one-sided and ineffective (in terms of the state) enterprise logistics, which should in the most cases give the way to the national logistics significant reduction of the investment, production, material and labor costs per unit of and then consumed products. It follows that the key to Russia's state policy in the Arctic should be maximum economy and the centralization of all activities of the companies involved in the system of the economic development of the resources of the Arctic zone of Russia. This implies need to create a single state logistics center (with branches at the nodal points of the reference frame of the North of Russia) with submission to him of all relevant transport structures and facilities.

Obviously, in the targeted transport construction in northern Russia should be used as efficiently as possible, not only by its huge domestic significance, but also the global experience in the developing of the Far North. In this respect, it seems to me important activity of the Archangel Research Center Branch of RAS and the Northern (Arctic) Federal University named after M.V Lomonosov, the study of the historical heritage of the Russian exploration of the Arctic zone of the Earth.

The most important part of the backbone of the transport network in the Russian North are universal, that is, in a discrete mode which may carry a variety of cargo and passengers (residents and staff) of transport. These modes of transport should include (in order of priority for the entire period of development of the northern region of Russia): rail, sea, river. Naturally, in the course of development of these main elements, universal transport role, involvement of these modes of transport can vary widely. So, at the beginning of large-scale development in the Arctic, in our view, will be somewhat higher value of the sea and river transport is somewhat lower. The establishment and operation of the main railroads in the area and the subsequent economic development of resources will undoubtedly contribute to a gradual strengthening of the role of river transport mode.

To the main modes of the transport should also include the piping systems, "transportation" for the long distances produced in the subarctic and the arctic zones of oil, natural gas and other raw materials, the organization of the transport of mixed products – capsule-wires, pipeline transportation of dry and wet products, product (say, product oil, methanol, liquefied natural gas (LNG), etc.). As calculations and current practices, the effectiveness of the pipeline systems with increasing load factors and the use of the design capacity of these systems [12, 18, 19, 29, 30, 32].

To areal, regional, that is narrower in scope and extent of the transport is used for that purpose main mode of the transport: rail, sea (small and medium cabotage), river, infield pipelines, and also, because of the limitations in the area of roads and their low economic efficiency to a lesser extent, the transport sector. However, the use of the automobiles and tractors on winter roads, ice tracks and the frozen rivers can significantly expand while improving efficiency of its operations in the winter season (November to April). The effectiveness of these services (including productivity, cost of the transport and energy) can be significantly increased, as evidenced by the national practice of 30-50-ies of XX century, through the use of trucks and trailers more that makes this type of transport links rather effective and meaningful to practical application in a series of the economic development of the Russian Far North.

Among the predominant purpose of intra-use should also include the air transportation, especially if they receive the significant development of the aerostatic devices - thermostats, airships and the modern transport systems – thermo-ballastiruemye aerostatic aircrafts (ATLA) [12, 19].

As for the infield transport, the composition and the extent of its use will depend entirely on the type of cargo, their volume, range, which will handle logistics calculations of the economic actors (industry) on the basis of the purposes and principles of the economic efficiency (cost and benefits), that is to be implemented principles of the corporate logistics [12, 19].

In the coming years will consistently increase the load on the Northern Sea Route, which implies the efficient use here as vehicles awaiting modernization and disposal of the nuclear submarines (SSNs). Calculations show that the use of the peaceful nuclear submarines can provide the significant economic benefits, because it allows already in this decade to begin the development of oil and gas, ore and other deposits on the continental shelf of the Russian sector of the Arctic [15-18].

The involvement of the Premier League as a vehicle for the international and transit traffic along the NSR and the more high-latitude routes along the Arctic Ocean will significantly replenish the foreign exchange reserves of the country. Planned construction GTSAPS underwater tankers and transports -are a nuclear-water vehicles (Apts) carrying capacity of 50 tons or more will begin large-scale development of oil and gas and other deposits on the Arctic shelf, which will significantly reduce investment in the implementation of the production projects (at the bottom of the Arctic Ocean) due to appear the unnecessary laying pipeline systems on the ocean floor. At the same time allow the use of Apts highly cost effective development of high-latitude transport investment appeal, including mobile tunable international, foreign, with many countries of the world.

Conclusion

The framework design of the transport infrastructure in the Russian North in the key, strategic latitude and meridian lines can begin to build a modern transport infrastructure for expanding into the commercial production of raw materials and natural resources, much of Siberia, and in the future and the Arctic..

The organization of the railway outputs are the strategically important sea ports in the Arctic Ocean, which creates the conditions for the consistent development of the Arctic, but also provides for the formation in them of the key transport hubs, bringing together and coordinating the work of all types of the transport.

The formation in the key transport hubs of the public logistics centers (one center or branch) allows for more efficient and effective use of the transportation resources and benefits of the different transport modes, which will certainly contribute to a noticeable decrease in the value of the investment projects in the Russian North, greatly increasing their profitability, competitiveness and investment appeal.

The formation of the transport frame of the Russian North, and subsequently of the full range of the transport infrastructure, provides significant opportunities for accelerated economic development in the vast areas of the Russian North, Siberia and the Far East, the Arctic and contributes to the prestige and influence of our country in the world. Development of the territorial and natural raw materials of the Russian North should be in context, it is for our country radically improves the lives of the people of Russia and a significant leveling of living standards in the region.

Formation of the expanded Russian transport infrastructure in the Arctic presupposes programmatically to create the transportation of the resources and maximize the benefits of the different types of the transport, organizing centers where they are based, as well as nation-wide approach to the logistics of the cost-efficient use of the transport capacity (throughput and transport resources) of Russia in this area.

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



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Abstract

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

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

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

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

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

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

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

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

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

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

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

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

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

⁴ Pravda. 1979. 7 December.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

¹¹ The same place. p. 12-13.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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The researchers of the Melnikov Permafrost Institute of SB RAS as the basis for the modern «Arctic breakthrough»



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Abstract

Scientists at the Permafrost Institute of the USSR made a comprehensive research in the Arctic and the Arctic shelf in the 60-es of the XX century. For several decades monitored the unique natural phenomena inherent in the Northern Territory. On the basis of these data, as well as through the work of the Institute of the modern expeditions with foreign participants was possible to made 'Arctic breakthrough' and the construction of a powerful research station on the island Samoilovsky.

Keywords: *Permafrost Institute, the research in the Arctic and the Arctic shelf, academician P. I. Melnikov, Professor M. N. Grigoriev.*

The relevance of the studies of the Arctic today undisputed, moreover, constantly emphasized at the highest level. This is due to the geopolitical interests of Russia and other countries. Determine the future of the Arctic shelf of the world economy, as it is here focused abundant oil and gas. When it comes to the contribution of specific institutions in the study of the Arctic, it is found that the names of the first enthusiast and promoter of this study are slowly forgotten. Meanwhile, a number of institutes of the Russian Academy of Sciences for decades to accumulate data and to monitor the unique natural phenomena inherent in the Northern Territory. One of these institutions – is the Permafrost Institute named Melnikov Russian Academy of Sciences in Yakutsk.

Yakutian Research Station of the Permafrost Institute, Academy of Sciences of the USSR (YANIMS) was founded in 1941. Its task was including the study of the Arctic and the Arctic shelf by the expeditionary forces. YANIMS employee and director of the Northern Expedition N.F. Grigoriev recalled: "... the study of the permafrost in the Arctic was just beginning. Extremely interesting testing ground for the work in the direction of Lena's Delta. In the first field season in 1946 was held in the delta of the Lena River permafrost studies with manual drilling of the shallow wells, a description of the structure and the composition of the frozen ground, as well as their

temperature ". [1] In 1947 he conducted the second field season of the Northern experiments. The results showed that the work on the Lena River is very promising. In 1950, N.F. Grigoriev completed his thesis on "The role of permafrost and ice deposits in shaping the landscape of the delta of the Lena River," which he successfully defended at the Institute of Geography of the USSR.

In 1956 YANIMS was transformed into the North-East Branch of the Institute of Permafrost of V.A. Obruchev USSR. On the basis of the potential branch in 1960, was created in Yakutsk Permafrost Institute (IMZ), Academy of Sciences of the USSR. Director Melnikov been invited to Yakutsk experienced professionals and graduates of the central universities. Institute has become a leading research institution geo-cryological profile comprehensively study the problems of the Arctic. Research topics defined unique natural phenomena of Yakutia.

An important part of the work was the study of the evolution of IMZ permafrost in the coastal shelf zone of the Arctic seas. One of the "pioneers" in the study of a Doctor of Geographical Sciences FE ERA. His monograph "thermo variety of the marine shores" (Novosibirsk, 1980) is the world's generalization of the results of studies of fracture processes coasts composed of permafrost, and one of the most cited publications are now in the world on the development of the Arctic coast. [2]

Monograph by M.K. Gavrilova "The radiation of the Arctic Climate" in 1966 was translated into English and published in the USA. Since that time, M.K. Gavrilova is an indispensable party to the international forum and a member of the international scientific community studying the climate changes and its effects on the permafrost. Textbook of Doctor of Geographical Sciences MK Gavrilova "climate of the cold regions of the Earth" printed in the several editions. [3]

Academician P.I. Melnikov researched the Arctic as a testing ground for the large-scale research collaboration. In 1973, in Yakutsk, the II International Conference on Permafrost. The participants saw the unique permafrost "Mammoth Mountain" on the river Aldan, visited other natural features of the Arctic territory of Yakutia. The conference demonstrated the opportunities to bring together scientists from different countries to meet the challenges of the Arctic shelf, the environment of the North, the development of its rich natural resources. [4]

In the early 70's P.I. Melnikov came with the proposal in the USSR SCST the need to study the dynamics of the Arctic permafrost. Although the initiative was not supported by the Academy of Sciences of the USSR, the concept of monitoring permafrost IMZ Lena-AMGA realized in expeditions with the international participation. Yakutian Permafrost team has undertaken extensive research on the regional permafrost coast and shelf of the Arctic Ocean [5], which enabled the Institute to carry out a number of international events, including the International Symposium

"Geocryological research in the Arctic" (Yamburg, 1989). Academician P.I. Melnikov proposed the idea of an International Arctic Centre, the prototype currently in the force of the Northern Forum. [4] In his view, the function of this center was to be the development of the analytical information about the Arctic that promotes the adoption and the implementation of the political decisions with minimal risk. At the same time focus was to be the focal point of the integrated research, both domestic and international groups. Although the idea of Melnikov not then realized, joint research carried out at the beginning with their American counterparts, and then, in the mid 90's they were joined scientists from Germany and Japan.

In 1994 the project started between Russia and Germany to study the natural environment of the Laptev and East Siberian in oceanography, biology and climatology. His work was coordinated GEOMAR - scientific engineering company in Germany. The objective of the project was to study the Arctic, which would allow judging the natural mechanism of the formation and destruction of the ice complex, as well as changes in climate and physiographic conditions in northern Central Siberia, and in the coastal zone of the Arctic basin. [6]

The team of the scientists IMZ RAS studied the conditions for the formation of the underground ice complex of the Arctic lowlands and determined the speed of the modern destruction of the coast of the northern seas. Studies foot ice complex on the shores of the Laptev and the East Siberian possible to refine the data on the geological age of the complex. As a result of stationary observations at key locations around the coast of the Laptev and East Siberian identified the rate of destruction of the coastal zone. [7]

To the knowledge of the natural environment of the coastal zone of the Arctic branch connects Potsdam Institute of the Polar and Marine Research, Alfred Wegener, whose director G. V. Hubert since 2008 is the President of the International Permafrost Association. The interest of German researchers in the Arctic due to several factors: First, geopolitical, and secondly, scientific (in Germany there is no natural site for Arctic research.) First, work was carried out on the Taimyr Peninsula and the northern lands, and then in the Arctic region of Yakutia. In 1998 began to work the Russian-German expedition "Lena." Institutions-organizations are the Institute of Permafrost expedition named Melnikov RAS and the Arctic and Antarctic Research Institute of Roshydromet.

One of those expeditions was to study gas emissions from permafrost soils on the island Samoilovsky in the delta of the Lena River. There was a scientific station. However, the conditions of the expedition at the station "Samoilovsky Island" were cramped. First Station "lodged" in the house of Ust-Lena Reserve, and then placed in the extension of several rooms. Gradually, the station turned comprehensive studies of the environment, including climate, permafrost, geomor-

phology, micro-and macrobiotic, hydrological, and many other areas. Scientists working at the station Russian research institutes and universities in Moscow, St. Petersburg and Murmansk. Siberian Branch of the Russian Academy of Sciences institutes was: Permafrost, biological problems permafrost (Yakutsk), Forest (Krasnoyarsk). [8]

From IMZ in this project worked a group of the staff and of the graduate students under the direction of Doctor of Geographical Sciences M.N. Grigoriev. That he was in the Siberian Branch of RAS coordinator of the Russian-German Arctic expedition "Lena." A graduate of the Moscow State University (1981), a young scientist has grown into a major specialist cryogenic geomorphological processes in the coastal shelf of the Arctic region of the Eastern Siberia under the influence of his father's scientific interests of N.F. Grigorieva and the chief of cryogenic laboratory IMZ-F.E. Are.

M.N. Grigoriev published a monograph "Krio-morfogenez in the mouth area of the Lena River" (Yakutsk, 1993), co-authored several papers published in Germany. One of them – is the "expedition" Lena - Anabar 2003 "published in English in 2004. Her co-authors on the Russian side were M. Grigoriev and V. Kunitsky. The participant of the dozen Arctic expeditions M. Grigoriev developed a scientific concept of the development, the current state of the dynamics of the coastal shelf of the Arctic seas of the Eastern Siberia.

The international project largely relies on the reserve, which was established in IMZ in the previous years by many generations of the researchers. Lower reaches of the Lena River and the shores of the Arctic coast has been studied previously mentioned staff IMZ N.F. Grigoriev, F.E. Are, M. Grigoriev and Vladimir Kunitsky, who published a monograph "Kriolitology of the lower reaches of Lena" (Yakutsk, 1989). The data accumulated by the international expedition to the station "Samoilovsky Island" in 1998, will assess the state and the evolution of the natural environment of the Arctic zone of the Eastern Siberia in a changing climate. Results of the studies presented at international conferences and published in joint ventures with foreign researchers of the books.

It should be noted that in recent years, the foreign experts are increasingly active in the study of the Arctic, and international cooperation has reached a new level. The efforts of both Russian and international community implemented the major projects for the study of the Arctic shelf and Arctic seas, permafrost conditions, and other problems in the Arctic, and these projects have to allocate more financial resources. For a long time the projects were financed mainly by the foreign partners. However, in recent years, the cooperation is to study the Arctic on a parity basis. A striking example is the creation of a modern plant on the island Samoilovsky.

In August 2010, the Russian Prime Minister Vladimir Putin visited the hydro-meteorological observatory in the village of Tiksi and the research station on the island Samoillovsky. On the outcome of the years of work on the research station he was told, along with German colleagues employee IMZ M. Grigoriev and graduate A.A. Urban, A. Sandakov, A.M. Cherepanov. Vladimir Putin has been demonstrated the most striking results of the study of the Arctic zone of Yakutia. M. Grigoriev recalls: "During the tour of the island, we gave the prime minister some explanations, such as: how many hundreds of meters beneath our feet permafrost as polygonal form of education, etc. Then there was a long, about an hour, round table. Basically, on the theme of science, communication was quite alive - in its course and the question of the necessity of building a new station at Samoillovsky "[9].

The results of the work of the international expedition "Lena" was found to be very important, and their direction - promising. Following the visit of Vladimir Putin decided to build a new modern Russian-German research station (NICs) on the island Samoillovsky to strengthen the international efforts on the state and the evolution of the Arctic environment.

V.V. Putin also instructed the government of Sakha (Yakutia), with the participation of Russian Academy of Sciences to develop a program to revive the village of Tiksi, including the creation of a permanent Arctic research center for basic and applied research in the Eastern Arctic, and the definition of its main research directions, the implementation of which should be with the active involvement of the institutes of the Russian Academy of Sciences and other research institutions of Russia.

After the visit of Vladimir Putin's events began to move very rapidly. In order to the Government of the Russian Federation on October 18, 2010 Prime Minister Vladimir Putin ordered the relevant ministries in 2011 to provide the necessary financing for the plant on the island Samoillovsky and Spetsstroy Russia called for the design and construction of the station, with the participation of Sakha (Yakutia) and the Russian Academy of Sciences. Decree of the Presidium of the Russian Academy of Sciences on November 19, 2010 in the Siberian Branch established a commission headed by the Acting Chairman of the Presidium of the Yakutsk Scientific Center RAS corresponding member of AF Safronov. By IMZ it included PhD R. Zhang and M. Grigoriev [10]. The Commission agreed on the terms of reference for the design, and then the project of a new hospital. [11]

In December 2010, M. Grigoriev as the biggest expert on the international cooperation in the Arctic, addressed a meeting of the Presidium of the Russian Academy of Sciences in Novosibirsk, with a detailed report on "Dynamics of permafrost coastal shelf zone of the seas of East Si-

beria." He summarized and outlined prospects IMZ research on the topic, stressing that the institution is working in the Arctic, with the 60-ies of the last century. In discussing the report, the Bureau emphasized the importance of this work in connection with the inevitable in the near future, oil and gas output in the Arctic offshore and came to the conclusion that the formation of a unified program of Russian Academy of Sciences for the Arctic [12].

In early March 2011 (Yakutia) an official visit to the Vice-President of Russian Academy of Sciences, Chairman of the Siberian Branch of the Russian Academy of Sciences Academician ALAseev and the Deputy Chairman of the SB RAS, Director of the Institute of Petroleum Geology and Geophysics name Trofimuk (IPGG) SB Academician M. Èpov. When discussing the development of the scientific and technological capabilities with the management of Sakha (Yakutia), the parties have agreed that in August 2011, will hold another meeting to discuss the construction of a research station on the island Samoilovsky (based on hospital IMZ). It was also agreed to collaborate in the organization of the Center of advanced development of the Arctic zone of the Russian Federation in the village of Tiksi. [13]

March 21, 2011 the Resolution of the Government of the Russian Federation "On the implementation of the public investment in the design and the construction of a research station on the island Samoilovsky and its subsequent use." It prescribes the highlight of the federal budget in 2011-2012 half a billion rubles to organize the construction of the hospital and the necessary equipment. The resolution also contains an item on the transfer station built Sciences. However obscure the question remains: which institution Sciences planned to submit a new hospital and what means to carry out its current contents. [14] It seemed obvious that the work will be coordinated by IMZ RV as one of the main representatives of the Russian side in international projects implemented in the island Samoilovsky for many years. However, the events developed differently.

In early August 2011, according to the March agreements and by the President of the Sakha Republic (Yakutia), EA Borisova, in Yakutsk, a joint meeting of the Presidium of the Russian Academy of Sciences and the Government of Republic of Sakha (Yakutia). To participate in the meeting were invited leaders and leaders of the science centers in Novosibirsk, Tomsk, Kemerovo, Tyumen, Irkutsk, Krasnoyarsk, Ulan-Ude, Vladivostok, Moscow and other Russian cities, as well as Germany. [15] In Yakutsk's President of the International Permafrost Association and director of the Potsdam branch of the Institute for Polar and Marine Research Professor Alfred Wegener G.V. Hubert. At a round table was organized by a comprehensive discussion of the problems of the Arctic. In the free discussion and exchange of views was understood that the construction of the research vessel

"Island Samoilovsky" is necessary for the consolidation of research institutes of the organization of complex research in little-studied the East Siberian Arctic region, as well as perform basic and applied research. [16]

With the report on the characteristics of the islands and the surrounding area Samoilovsky delta of the Lena River, as well as the results achieved by the study of the Arctic using the previously of the existing station on the island Samoilovsky-the Deputy Director for Science IMZ MN Grigoriev. The roundtable participants recognized the uniqueness of the ongoing collaborative research expedition "Lena" a long-standing partner of the expedition, Professor G. V. Hubert looked forward to the continued participation of the Institute in the research on the new station with the appropriate share of the financing of operating costs.

Following the discussion of the problems of the Arctic Resolution of the Presidium of the Russian Academy of Sciences on August 8, 2011, which referred to the need to develop a program of the research in the Arctic, based on the research vessel "Island Samoilovsky" involving the regional branches, the Siberian and the central universities, and other interested organizations in the country. The aim was to finally establish jurisdiction Research Station RAS and determine its status, assign management of NIS, enter to the government with a proposal to target its funding costs since 2012. [10]

In September 2011, M. Grigoriev gave the interview to the Public Relations Center of the Russian Academy of Sciences, and told how it all began. He noted that the first joint expedition "Lena" was held in 1998 and that the island Samoilovsky - only part of the mission, which forces scattered the delta of the Lena River and the coast of the Laptev Sea. Members of the expedition, a large amount of data on the status and the evolution of the region's natural environment. Recent monograph on the work of the expedition – is the «System of the Laptev Sea and the adjacent Arctic Seas" (2009) and the "State of the Arctic coast" (2011) - in Russian and English languages. A database on the Arctic coast across the Arctic Ocean, which is available on the website of the Institute of Polar and Marine Research, Alfred Wegener. In this case, the scientist said that the station on the island Samoilovsky unlikely to play a role of a transit base for the expeditions and other groups which do not operate on the study of the problem is in the area. [9]

In October 2011, in Yakutsk held a meeting of the Presidium of the Russian Academy of Sciences and a round table with the participation of academics A.L. Aseev and M.I. Epova. Yakutian permafrost researchers told about the danger with the anticipated influx on the island Samoilovsky because its size is extremely small (2.5 x 2.8 km) and do not take time over two dozen people. Academician M. Èpov proposed to establish an international working group to develop a

common research programs in the Arctic, and the vessel "Island Samoilovsky" to develop those areas that are specific to this unique place, not bringing back human and technological changes. To provide year-round operation of NIS participants "round table" decided to seek additional financing to the Russian Ministry of Education, Bureau of Sciences and the Government of the RS (I) [14].

In December 2011, during the General Meeting of Sciences in Moscow, was held the meeting with the government and with the president of the Siberian Branch of the Sakha Republic (Yakutia) E.A. Borisov and they discussed the mechanisms for the effective utilization of the scientific capacity of the institutions of the Yakut Scientific Center of the Russian Academy of Sciences in the socio-economic development of the republic, and the erection of a new research vessel on the island Samoilovsky.].

In March 2012 in Yakutsk again arrived Academician A.L. Aseev and M. Èpov who informed the President of Sakha (Yakutia) E.A. Borisov about the decision of the Presidium of Russian Academy of Sciences: as the station goes to the jurisdiction of the Siberian Branch, it will make the balance holder Novosibirsk Institute of Petroleum Geology and Geophysics name Trofimuk. In this case, the Director of the Institute, Academician M. Èpov assured the President of Sakha (Yakutia), which further station, has to become subordinated Yakut Scientific Center of the Russian Academy of Sciences, "a station on the balance of the Institute of Petroleum Geology and Geophysics - this is just an intermediate step. We plan to submit it to the jurisdiction of the Yakut "[17].

At the General Meeting of the Siberian Branch of the Russian Academy of Sciences in April 2012, Chairman of the SB RAS A.L. Aseev said: "The new research station on an island in the delta of the Lena Samoilovsky built on the direct instructions of Vladimir Putin. This place is in the distant Arctic is very important for the various observations of the aquatic environment, the atmosphere, the ionosphere, the wildlife, the environment, etc. Here we have an important outpost for research in the Arctic, and hope that such stations in the range of the Siberian Branch of the Arctic coast will be a few more. Work is currently underway on the station by the Permafrost Institute, and the Institute of Petroleum Geology and Geophysics, "[18].

New site for the Arctic researchers on the island Samoilovsky erected in the record time for the northern regions. The station is a convenient and spacious building: its four areas - laboratory, residential, food and recreation, conference room - combine warm galleries. The hospital is equipped with the most modern scientific equipment and commissioned in the fall of 2012. Leaders of the Siberian Branch of the RAS, and plans to build more stations, which will support research network in the Arctic [19].

Currently, the scientific community is determined to the work plans on the island Samoilovsky. The Siberian Branch prepared the Arctic research program, its full title - "Integrated research on the state and the evolution of the natural environment of the Siberian Arctic, using the research station (NIS)" Island Samoilovsky "(coordinator - Academician M. Èpov), to participate in a filed more than 50 project proposals from institutes of the Russian Academy of Sciences. Its main areas include the study of the hydrosphere, atmosphere, biosphere, land surface and subsurface of the Siberian Arctic.

The participation in the program was devoted to other organizations International Russian-German Workshop on the evolution of the environment in the Arctic region of Siberia (Novosibirsk, May 2012). In the course of this seminar were made important decisions.

First, the participants emphasized that the resulting of the international expedition "Lena» the scientific results on the state and the evolution of the natural environment of the Arctic zone of the Eastern Siberia in a changing climate conditions is considered unique because of the complexity of the research and continuous nature of the observations (the results of studies reported at more than one hundred international conferences).

Second, it is agreed that the Arctic program is open. It will be attended by Siberian and the Far Eastern Branch of the Russian Academy of Sciences, Ust-Lensky Nature Reserve (in its territory is an island Samoilovsky) the Arctic and Antarctic Institute (AARI) Hydromet, Russian and the foreign universities, the research centers in Germany. Subsequently, the program can join the other participants.

Third, the international status of approved NIS. Created the International Coordination Council for the development and the scientific support of the Arctic as part of the Deputy Chairman of the SB RAS Academician M.I. Epova, the President of FEB RAS Academician V.I. Sergienko, AARI Director, Doctor of Geographical Sciences I. Frolov, Scientific Director of the Institute for the Polar and marine Research Alfred Wegener (AWI) professors G.V. Hubert and C. Viltshire.

Fourth, identified the main foreign partner in the Arctic program-AWI. Academician M.I. Èpov and Professor G.V.Hubertenom signed a separate memorandum of the cooperation with the Russian Academy of Sciences and the AWI [20, 21].

On the seminar with the report "frost-geo-morphological studies in the delta of the Lena River: main results and prospects" was made by the Officer IMZ Doctor of Geographical Sciences M.N. Grigoriev. He reminded the participants that the IMZ – is a unique institution because it is the only country engaged cryo-litho zone of the permafrost and its modifications [20]. Those scientists who have long been familiar with the research IMZ, bewildering fact that the members of

the International Coordinating Council of the Arctic were not representative of the scientific establishment.

In connection with the development of the Arctic shelf interest of the international scientific community to the phenomenon of the permafrost continues to grow, as evidenced by the representative international congresses and conferences taking place not only in Russia but also abroad. Increasingly are proposals to study the regions with the natural factor with a network of the modern biosphere stations, and one of the first of these stations was the research vessel "Island Samoilovsky." It seems very important that the results of the "pioneers" comprehensive study of the problem of the permafrost received adequate assessment in the modern annals of the Arctic exploration.

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The transformation of the mobile forms of the copper in the seasonally frozen soils of the Arkhangelsk region



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Abstract

Studied the accumulation, migration and transformation of the mobile forms of copper in different types of soil in Arkhangelsk. In urban soils, as opposed to natural, not only changes the relationship of transformational forms, but the nature of the relationship of copper with soil components. The influence of technogenic to consolidate copper in the soil and on its possible transition conditions change to the neighboring environment.

Keywords: *copper, kulturozem, replantozem, urbanozem, transformational form.*

Introduction

In the extremely difficult ecological situation prevailing in many parts of the world, geochemical cycles of heavy metals (hereinafter - TM) in the biosphere are determined not so much by the natural redistribution of how human activities [8, 2004]. At present, the relevance of the study of metal compounds in soils and their transformation mechanisms is increasing due to the need for adequate assessment of contaminated soils, prediction of their change, finding ways to improve them [10, 1998].

TM are among the number of the priority pollutants. According to the pollution of TM soils are the bio-geochemical barrier that absorbs the fine materials and gases from the atmosphere, while clearing the other neighboring environment.

In the atmosphere and hydrosphere is a periodic self-cleaning of pollutants, the soil is almost does not have that ability, and TM accumulate in the upper humus layer. Particularly vulnerable soil in the north, exposed to the cold climate and permafrost, the period they do not have self-cleaning.

TM well adsorbed the layers of soil, their connections for a long time retain high mobility and the toxic properties. Being a man-made substances storage, soil can become a secondary source of air pollution, plants and natural water, which can cause the growth of environmentally harmful effects [9, 2003].

Copper belongs to the group of TM and metalloids (II hazard class). Copper – is one of the biologically important, essential trace elements. Her role in the life of living organisms is very diverse. The copper content in organisms ranging from 10-15 to 10-3%. The main role of copper in the tissues of plants and animals - participate in enzyme catalysis. Copper is an activator of a number of reactions and is part of the copper-containing enzymes (primarily oxidase) that catalyzes the reaction of biological oxidation. Copper-containing protein plastocyanin is involved in the process of photosynthesis, i.e. improves the chlorophyll content in leaves. Copper affects the nitrogen metabolism: in her presence of nitrate reeducates activity increases. It is well known that this element has a high complex-forming ability. Lack of copper in soils affects the synthesis of proteins, fats and vitamins in the plants. However, excessive concentrations of copper are harmful to them. Contamination of soil with copper alters the active functioning of the soil microbial community structure and composition of the soil microbial complexes, which results in a decrease in their species diversity and the dominance of a small number of species [5, 1989].

The feature of the pollution of land cover in the industrial city is that a relatively small area comprises a large number of different sources [9, 2003]. Sources of heavy metals in urbo-geo systems city divided into natural (igneous and sedimentary rocks, rock-forming minerals) and man-made. In this flow of HM in soil and vegetation are a variety of ways: emissions into the atmosphere, with the flow of sediments and sewage, with the products of the decomposition of organic residues and microbial synthesis, direct revenue from the business (fertilizer, pesticide use, storage and disposal of household and industrial waste).

Soils and plants are involved in the small circulation of substances (including TM): root system has escrowed properties (stores and distributes incoming material) through root exudates,

the litter of leaves and death of the plant these elements into the soil again. It should be noted that the substances formed by the decomposition of the organic residues and directly secreted by plant roots, have a very high mobilizing capacity, that is, have a direct effect on the hard compound in the soil, converting them into a digestible form.

In the city of Arkhangelsk, the main sources of pollution are the power generation, fuel, timber, woodworking and pulp and paper industries, major rail, aviation and highways.

From stationary sources in the first place Arkhangelsk CHP, coal boilers of making a major contribution to the anthropogenic atmospheric pollution copper. Releases to the environment occurs through anthropogenic dispersal. In the air the bulk TM comes from chimneys and vents, as well as accidental releases into the atmosphere. Most of the precipitates in the vicinity (1-2 km) of enterprises and other sources, some of the pollutants carried by the atmosphere at a distance of 10-15 km, a certain percentage goes to the upper atmosphere and spread over many hundreds or thousands of kilometers [8, 2004]. TM is an important source of transportation. It was found that not only serves as a combustion source of pollution, but also the use of organo-metallic antiknock as an additive in the fuel can also contribute to emission of copper in the atmosphere [10, 1998]. Thus, the pathways of copper in soil and vegetation are different, so its compounds in the soil and in plants can vary widely according to the forms properties: the mobility and migration capacity, instruments fixing soil components.

Communication mechanism for TM with soil components, and on how to retrieve it, two groups of compounds (Table 1):

- 1) compounds, in which copper is retained on the surface of the soil particles with organic and mineral components of soil in the exchange and specifically adsorbed state, are grouped in a loosely tied copper compounds. This group of compounds of copper is the most important from an environmental point of view, since it is in this form of copper enters the plant and migrates to other neighboring environment;
- 2) compounds, in which copper is firmly fixed in the structure of primary and secondary minerals, sparingly soluble salts of organic and sustainable and organic copper compounds are grouped in a tightly bound compounds [1, 2006].

Table 1

Transformation forms of cope in the soil

Group	Forms of compound cope	Examples
Loosely connected com-	Water-soluble compounds	CuCl_2 ; $\text{Cu}(\text{NO}_3)_2$; $[\text{Cu}(\text{OH})_2\text{CO}_3]^{2-}$; $[\text{CuOH}]^+$; $[\text{CuHCO}_3]^+$; $[\text{CuCl}_4]^{2-}$ and etc

pounds	Link exchanges	
	Specifically adsorbed on the surface of the solid phases	
	Soluble compounds	
	Compounds, hard connected with compounds	CuS, CuCO ₃ ; Cu ₃ (PO ₄) ₂ ; Cu ₂ SiO ₃ , CuO, Cu ₂ O; Cu(OH) ₂ ; (CuOH) ₂ CO ₃ ; Cu ₂ SiO ₄ ; Cu(HPO ₄) and etc.
Hard connected compounds	Connected with organic substances	Humates, fulvates and complexes of heteropolar salts: [Cu(OH) ₂]ΦK, GK(COOCu) _n , FK(COOCu) _n , chelated copper compounds
	Cope in the minerals	Turquoise CuAl ₆ [PO ₄] ₄ (OH) ₈ ·5H ₂ O, bornite Cu ₅ FeS ₄ , chrisokolla (Cu, Al) ₂ H ₂ Si ₂ O ₅ (OH) ₄ nH ₂ O

Objects and methods of the research work

For the chemical analysis were taken three types of soil (urbanozem, replantozem, kulturozem) residential landscape, located in the central part of the city of Arkhangelsk. As a control (reference standards) for urban soil was selected natural turf low-power light loamy soils formed on dry meadow near the village Babonegovo Primorsky district of the Arkhangelsk region. This choice was dictated by the fact that the process of soil formation takes place in Arkhangelsk on turf, not by podzol type characteristic of the region. Description of plots is given in Table 3 [6, 2006].

Selection, storage and transportation of soil samples were carried out in accordance with GOST 17.4.4.02-84 [3, 1984]. Definition of mobile forms (hereinafter - PF) of copper in soils was carried out extraction-photometric method on how to GOST 50683-94 [2, 1994], using the pre-decomposition of the organic matrix of the soil.

To highlight the transformation forms of copper was chosen combined method of fractionation (Table 4), using the most common method of fractionation of metals Tessieru (1979), together with parallel extraction [6, 2008, 2, 1994]. Mobile (acid soluble) forms of copper were extracted from the soil with nitric acid.

To assess the level of contamination of soil copper concentration ratios used (K₀, K_k), defined as the ratio of the actual content of the analyze in the test point to its content in a similar environment to the background area or PDK:

$$K_0 = \frac{\tilde{N}_i}{\tilde{N}_0}, K_k = \frac{\tilde{N}_i}{C_0},$$

where C_i - the maintenance of the chemical elements in the sampling points; S_f - the average maintenance of the element in a similar environment in the background section.

The data obtained statistically treated by the conventional methods in Excel. To study the structure of the relationship parameters studied using correlation analysis.

The discussion of the results

Studies have shown that the total maintenance (SC) of copper in natural soil is 14-23 mg / kg (depending on the horizon), which does not exceed PDKVS = 53 mg / kg ($Co < 1$). In urban soils, it ranges from 38.4 (PP № 40) to 84.0 mg / kg (IP number 60). PCB № 60 exceeding the PDKVS ($Co > 1$), and QC for the studied PP $\gg 1$ (2,7-6,0). This suggests anthropogenic soil contamination to the pollutants. PF copper content in all soils exceeds PDKPF = 3 mg / kg ($Co \gg 1$). Calculation of the biogeochemical indicators is presented in Table 2.

All urban soils contaminated to varying the degrees of mobile copper ($K_c \gg 1$ on all PP), and the image number kulturozem > urbanozem > replantozem. This is due to the age of building area. Kulturozemy - the oldest soils, which are formed on the site of the old gardens, so the period of provision of technological impacts and the accumulation of copper in the soil will be maximized.

PF share of copper for natural soil ranged from 79.14 to 92.40%, for urban soils from 85.52 to 99.33%, which is mainly contained copper in soils in the PF, is its "potential" reserves.

The fractional composition PF copper was evaluated by determining the proportion of each form obtained using selective extracts from the total number of FS.

TABLE 2

Bio-geo-chemical criteria assessment of the soil cover

Indicators	Type of soils											
	Natural soil			PP № 40			PP № 60			PP № 3		
	A _д	A ₁	B	Uha3	Uina1	L	Uha2	U↓↑ ₂ ^a	DUa3	A _д	A ₁	B
****BC, mg/kg	14,0	15,0	23,0	38,4	44,0	43,0	56,7	45,0	84,0			
K _o (BC)	0,2	0,3	0,4	0,6	0,8	0,8	1,1	0,8	1,4			*НД
K _к (BC)		*НД		2,7	3,1	3,1	4,1	3,2	6,0			
**PF, мг/кг	11,1	13,9	19,1	32,8	41,1	42,1	56,0	44,7	73,6	84,7	67,7	76,5
W (PF), %	79,1	92,4	83,3	85,5	93,4	97,8	98,8	99,3	87,6			
W (***NF), %	20,9	7,6	16,7	14,5	6,6	2,2	1,2	0,7	12,4			*ND
K _o (PF)	3,7	4,6	6,4	11,0	13,7	14,0	18,7	14,9	24,5	28,2	22,6	25,5

*ND – NO DATA; **PF – MOBILE FORMS; ***NF – UNMOBILED FORMS; ****BC – GROSS CONTENT.

Table 3

*Agrochemical indicators of the researched soils **

№ PP, Location	Level	Mechanical level of the structure	Type of the soils	indicators									
				BC (Cu), mg/kg	pH wa- ter	Clay, %	* OG, %	***** GK, %	***** ΦK, %	***BC (Ca), mg/kg	***BC (Fe), mg/kg	***BC (Al), mg/kg	***BC (Mn), mg/kg
Control (Arkhangelsk, Konetsgore)	Ad	Leg.sugl. + sand	Natural soil	14,0	7,28	**НД	5,2	0,5	0,2	74,8	0,2	0,34	106,5
	A ₁	Leg.sugl.		15,0	7,28		4,0	0,4	0,2	72,4	0,3	0,20	96,0
	B ₁	Heavy sugl.		23,0	7,34		1,5	0,1	0,1	71,6	0,3	0,34	73,8
	Ad	Leg.sugl.			7,07		13,1	1,8	0,6	154,2	0,2	0,06	201,5
3 (Arkhangelsk, Petrovskiy Park)	A ₁	Middly sugl.+ humus	Culturozem	**НД	7,68	9,0	10,4	1,3	0,6	107,5	0,2	0,02	177,8
	B ₁	Leg.sugl. + humus			7,80	17,0	6,6	0,6	0,4	144,8	0,2	0,02	221,7
60(Arkhangelsk, Street. Loginova, and Troizkiy street)	Uh a2	Sandy loam + humus	Urbanozem	56,7	7,40	19,0	12,2	1,1	0,6	129,8	0,2	0,02	297,4
	U↑↓a 2	Sandy loam		45,0	7,30	16,0	8,4	0,4	0,5	193,4	0,3	0,03	271,4
	DU a3	Sandy loam		84,0	7,44	8,0	3,3	0,2	0,2	232,4	0,1	0,04	203,3
	Uh, a3	Sandy loam		38,4	7,52	12,0					0,3	0,03	7,1
40 (Arkhangelsk, Komsomolskaya str., 36)	Uih, a1	sand	Replantozem	44,0	7,08	10,0		**НД			0,3	0,01	21,4
	L	Sandy loam		43	7,68	5					0,3	0,01	25,8

** NA - NA; *** Sun - the total content of the element; **** OG - organic matter content; ***** GC - content of humic acids ***** FC - the content of fulvic acids. Abbreviations: lay down. sugl. - Light loam; cord. sugl. - Heavy clay; media. sugl. - Medium loam.

These laboratories biogeochemical studies at the department of chemistry and chemical ecology NArFU named after MV.Lomonosov.

Table 4

***The combined scheme of the fractional soils of the zinc compounds
[6, 2008; 11, 2006]***

Indicator	Way of finding	
	Experimental	Estimated (the difference between the content of heavy metals in the extracts)
1	2	3
	1. Maintenance of metals in the exchange form :	
– Total	1H ААБ, pH = 4,8	
– Easy to exchange	0,05 M Ca(NO ₃) ₂	
– Difficult to exchange		1H ААБ – 0,05 M Ca(NO ₃) ₂
	2. Metal maintenance associated with carbonates, and in separate phases:	
– Loosely linked	2,5 % CH ₃ COOH	
	3. Metal maintenance associated with the non-silicate compounds of Fe, Al, Mn:	
– Total	0,04 M NH ₂ OH·HCl	
– Loosely linked		(1H HCl – 1H ААБ) – 2,5 % CH ₃ COOH
– Tightly linked		0,04 M NH ₂ OH·HCl – (1H HCl – 1H ААБ – 2,5 % CH ₃ COOH)
	4. Metal maintenance associated with organic matter:	
– Total	30 % H ₂ O ₂	
– Loosely linked		1 % ЭДТА в 1H ААБ – 1H ААБ
– Tightly linked		30 % H ₂ O ₂ – 1 % ЭДТА

Natural soil

In natural soil PF distribution in the soil profile is uneven. The second horizon is sharply increased the share of the Fermi surface (from 79.1 to 92.4%), which may be associated with a slight grading of the soil horizons and the effect of washing water regime. In the subsurface PF content decreased (83.3%) due to the occurrence of a mechanical barrier at the second and third of the soil horizons. In natural soil predominate form of copper associated with the non-silicate compounds of Fe, Mn, Al (72,2%), and copper are associated with soil organic matter (41.2%) (Picture 1). Exchange forms can be submitted free copper ions and copper held by electrostatic forces on the clay and other minerals, organic matter and amorphous compounds soluble copper complex compounds with inorganic anions or organic ligands of different strength [6, 2008, 11, 2006]. In natural soil exchange forms are present in the soil horizon Hell (0.19 mg / kg) in the form of mobile difficult to exchange compounds with organic matter ($r = 0,75$) and clay minerals ($r = 0,97$). Specifically adsorbed form of copper available in view of the fact that the analyzed soil is noncalcareous.

Copper is associated with non-silicate compounds of Fe, Mn, Al, - is occluded copper cations in amorphous compounds or adsorbed on the surface [11, 2006]. By binding copper and non-silicate compounds Fe, Mn, Al (72,2%) is its accumulation in the natural soil. The copper in the form of fixed difficult to exchange compounds Fe ($r = -0,92$) and easy to exchange compounds Mn and Ca ($r_{Mn} = -0,98$, $r_{Ca} = -0,96$). Education PF copper able to migrate to the neighboring

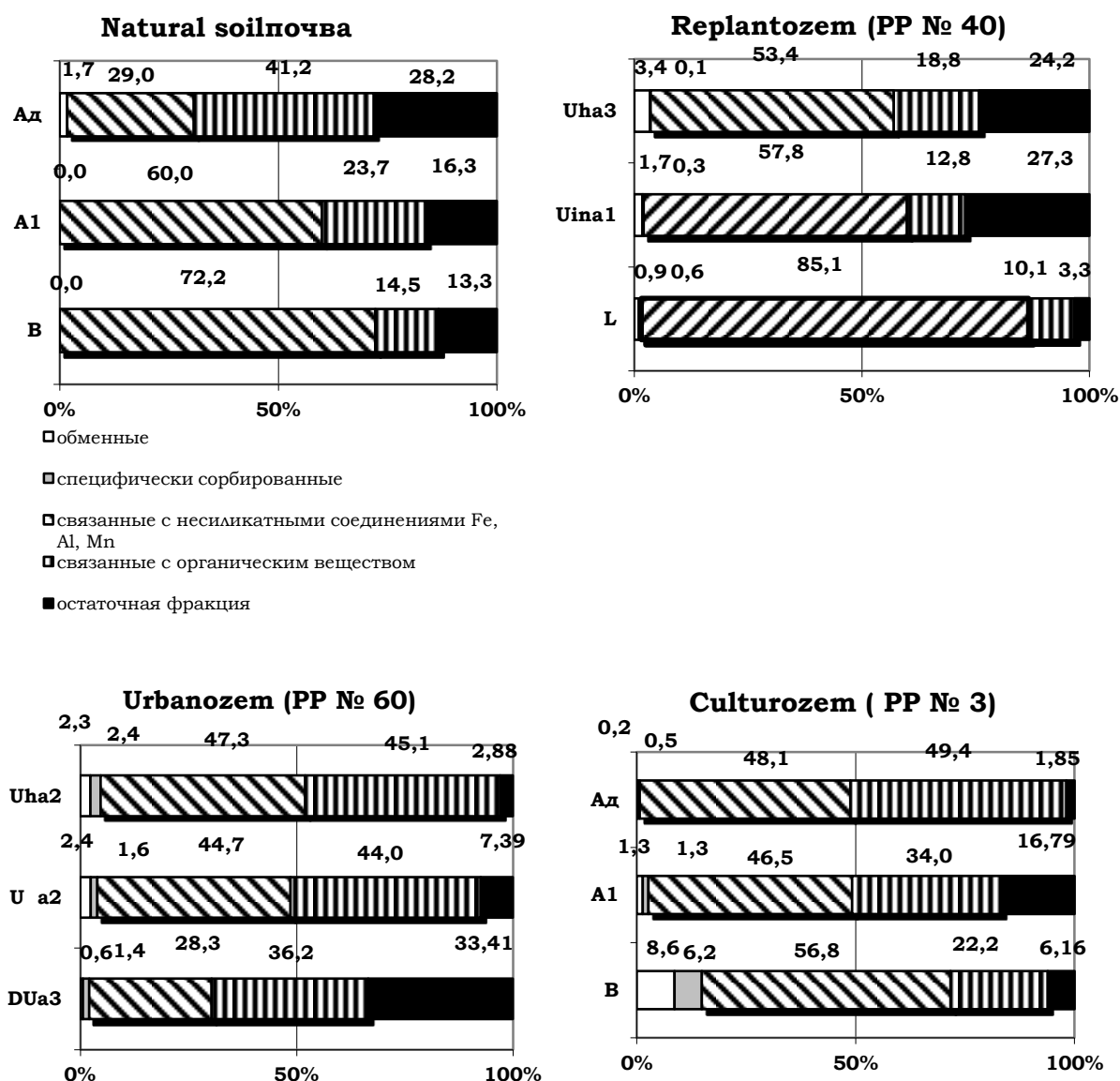
environment, will be due to the formation easy to exchange compounds with Fe ($r = 0,75$), difficult to exchange compounds with Mn and Ca ($r_{Mn} = 0,88$, $r = Ca\ 0,99$), in lesser extent, in the form of compounds with difficult to exchange Al ($r = 0,42$).

Copper, having some amphoteric properties, in an acidic medium is in the form of cations Cu^{2+} , and in alkaline medium in the form of hydroxy- $[Cu(OH)_4]^{2-}$. Change in the reaction medium of the soil solution may increase or decrease the mobility of the element. For example, reducing the soil pH of the solution to $pH = 7$ easy to exchange copper compounds will move into insoluble forms difficult to exchange ($r = 0,87$).

Copper is associated with organic matter retained in the soil by the complication reactions with chelation to organic matter or organic matter associated with Fe^{3+} , Al^{3+} , Ca^{2+} , oxides and hydroxides of Fe, Al and clay minerals, as well as the part of the living matter and detritus. Down the soil profile, a decrease of copper forms associated with organic matter.

Larger part of the residual fraction of copper ($\sim 1/3$), the content of which decreases down the soil profile. This fraction can be a secondary source of pollution with copper.

Replantozem – is the soil and technical education in the fresh lawns and yards of the new buildings created by the mixing peat and sand in the regeneration area. Their thickness is filled with debris. They are formed as a backfill and on Pogrebnaya natural soils. The share exchange forms of copper in replantozem above ~ 4 times than natural turf soil. Number of this form decreases down the soil profile. Exchange forms of copper are easily movable and difficult to exchange forms with clay minerals ($r = 0,99$, $r = 0,58$, respectively). An inverse relationship between the content easy to exchange forms of copper and pH of the soil solution ($r = -0,61$). Consequently, the action of the alkaline barrier manifested in its consolidation.



Picture1. Mass fraction of the transformation forms of copper in the soils of Arkhangelsk

Specifically adsorbed compounds – the copper particles are held by covalent and coordination bonds. The share of the specifically adsorbed forms of copper that are primarily associated with carbonates of calcium and magnesium, low (0,12-0,59%). Perhaps this kind of consolidation going on anthropogenic inclusions (debris, asphalt, etc.). The high degree of correlation between the calcium content and the amount of specifically adsorbed forms of copper ($r = 0,95$) confirms the literature data [1, 2006] that can be attached to the copper carbonates of calcium and magnesium in the form of loosely related compounds. Clay minerals are involved in the formation easy to exchange forms of copper, capable of migrating to the neighboring environment ($r = 0,99$). In replantozem, as in the natural soil, copper is presented mainly in the form of forms associated with the non-silicate compounds of Fe, Mn, Al. Their content increases down the soil profile (from 53.4 to 85.1%). Accumulation of copper is in the form of compounds with difficult to exchange Mn and Fe ($r_{Mn} = -0,97$; $r_{Fe} = -0,86$), as easy to exchange connections to

Al ($r = -0,94$). Compound Fe, Mn ($r_{Fe} = 0,73$; $r_{Mn} = 0,90$) are involved in the formation of mobile forms. The copper content is associated with organic matter, less than in natural soil (~ 2-fold), the amount of this form decreases down the soil profile. In contrast to the natural soil profile down to a sharp decrease in the residual fraction (from 24.2 to 3.3%).

Urbanozem – is the soil outdoor lawn and yard area of the modern building. Can be formed in soils of different origin and the cultural layer, characterized by a kind of salty substrate humus mixed with man-made particles. The share exchange forms in urbanozem low (2,34-0,61%), the presence of exchange forms in the upper levels associated with either copper intake from outside, either by transforming other forms of copper. Exchange forms of copper are easily movable and difficult to exchange compounds with organic matter of the soil, and is equally as with humic and fulvic acids ($r_{FK} = 0.99$, $r_{GK} = 0.93$), with clay minerals ($r = 0,98$). There is evidence of a weak inverse relationship between the content of exchange forms of copper and pH of the soil solution ($r = -0,51$). Consequently, the action of the alkaline barrier manifested in its consolidation. Compared to the natural soil and the share replantozem by the specifically adsorbed forms. Calcium compounds will form with copper easy to exchange mobile connection ($r = 0,66$), which with increasing pH of the soil solution will dissolve ($r = 0,75$) and migrate to the neighboring environment. Content of forms related to non-silicate compounds of Fe, Mn and Al, less than replantozem. Down the soil profile, a decrease of copper in the form unlike replantozem and natural turf soil. Compounds of Al and Ca ($r_{Al} = -0,86$, $r_{Sa} = -0.87$) are involved in binding copper in the form of light and difficult to exchange compounds, compounds Fe ($r = -0,72$) - as easy to exchange connections. Mn compounds are also involved in the formation of mobile difficult to exchange forms of copper ($r = 0,98$), are able to migrate to the neighboring environment. Dependence on pH is similar as for specifically adsorbed forms ($r = 0,87$). Due to the fact that there is a layer of urbanozem "urbik" copper is more concerned with the organic matter (as opposed to natural soil and replantozem), the form of copper easy to exchange fixed mainly on the FC ($r = -0,75$). Movable difficult to exchange form on GC ($r = 0,91$), on the contrary, are more mobile than the FC ($r = 0,74$). In urbanozem, in contrast to the control, the percentage of residual forms is reduced, but down the profile of her sharply, reaching a maximum in the soil horizon L.

Kulturozem – is an urban fruits soils, botanical gardens, old gardens. Formed in the old town, characterized by a high humus horizon, the presence of humus layers torfo-kompostnyh capacity of more than 50 cm, growing on the lower part of the alluvial soil profile, the cultural layer or soils of different origin. Content exchange forms down the soil profile increases. In contrast to all other types of soil copper will be secured equally to FC and SC ($r_{FK} = -0.97$, $r_{GK} = -$


0.96) in the form of light and difficult to exchange connections. With a decrease in pH will be fixing exchange forms ($r = 0,70$). Down the soil profile is an increase in the proportion of specifically adsorbed forms (unlike the previously reviewed soils). Copper will be fixed in the form of compounds with easy to exchange Ca ($r = -0,77$). Dependence on pH is similar as in replantozem ($r = 0,71$). Share forms of copper associated with non-silicate compounds of Fe, Al, Mn, higher than previously considered soil, the content of this form decreases down the soil profile. Formation of mobile copper occurs with compounds Fe, Mn, and Ca in the form of easily-and difficult to exchange compounds ($r_{Sa} = 0,91$, $r_{Fe} = 0,73$, $r_{Mn} = 0,97$), with connections only as Al difficult to exchange connections ($r_{Al} = 0,95$). In kulturozem, as in other types of soil, down the soil profile decreases copper associated with organic matter. Difficult to exchange form of copper associated with organic matter ($r_{FK} = -0.89$, $r_{GK} = -0.86$), are fixed in the soil, easy to exchange - will dissolve and migrate to the neighboring environment ($r_{GK} = 0.96$, $r_{FK} = 0.95$). The distribution of the residual fraction is uneven: maximum concentration observed in the second horizon (16.79%) and the lowest - in the first (1.85%).

Thus, analyzing the distribution of copper in the form of transformation of natural and urban soils, we can draw the following conclusions.

1) Total content of copper in the soil does not exceed the natural PDKVS. For gross content and copper content PF studied soils can be arranged in the following series: kulturozem> urbanozem> replantozem> natural soil. In the absence of excess PDKVS found that intake of copper is man-made, since $KK > 1$

2) In all the studied soil samples are predominant PF, SF content is low. PF distribution of copper in the investigated soils is humus-accumulative nature (accumulated in the upper layer). Number PF copper in urban soils above: replantozem to ~ 3.5 -fold, and for urbanozem, kulturozem ~ 4 times higher than in the natural soil.

3) The maintenance and the distribution of copper in the form of transformation of the natural and urban soils in different ways:

-  in natural soil and replantozeme generally predominate forms of copper associated with the non-silicate compounds of Fe, Mn, Al. In kulturozem, urbanozem and commensurate with their share of copper associated with organic matter. In replantozem, kulturozem and, as in the natural soil, the content of these forms increases down the soil profile in urbanozem, decreases. In the natural soil, and replantozeme kulturozeme easy to exchange form copper compounds Fe mobile. The same characteristic shape easy to exchange copper compounds and Mn in replantozem, kulturozem. In natural soil and kulturozem Ca involved in the formation of mobile easy to exchange forms of copper. Securing copper compounds in the form of Fe trudnoobmennyyh forms characteristic of

natural soil and replantozem, urbanozem. In urbanozem as in replantozem, copper accumulation is possible by different forms of the compounds Al and difficult to exchange forms compounds Al and Ca;

- ✚ the most of the copper is in the form of complexes with organic matter, and in all soils, this form of copper decreases down the profile. In natural soil difficult to exchange mobile forms and mobile easy to exchange form copper FC and SC will dissolve and migrate to the neighboring environment. In urbanozem copper is accumulated by easy to exchange forms on FC, and migrate to the neighboring environment in the form of mobile difficult to exchange forms of HA. Kulturozeme In contrast, the form of copper difficult to exchange participate in its consolidation and moving easy to exchange form of copper will be quite mobile;
- ✚ in contrast to the natural soil in urban soils share exchange forms of copper is slightly higher, and they appear in the lower horizons. In replantozem, urbanozem data content and form down the profile decreases, and in kulturozem - increases. In urbanozem, as in the natural soil, the mobile will difficult to exchange form with FC and SC, in kulturozeme copper equally attached to the FC and SC;
- ✚ in replantozeme, as opposed to other types of soil is weak alkaline barrier affecting the consolidation of different forms of copper;
- ✚ in urban soils observed the emergence of specifically adsorbed forms of copper, but the content is very low. In these forms of urbanozem content decreases down the profile, and in kulturozem and replantozem - increases. Securing copper as easy to exchange forms Ca characteristic replantozema and kulturozema. In kulturozeme urbanozem and increase in pH increases the solubility easy to exchange forms of copper by forming hydroxo. In urbanozem difficult to exchange for copper in the form, on the contrary, an increase in pH leads to a decrease in solubility and transfer to the NF;

Thus, under the influence of the technogenic changes in the number of forms and transformational nature of the connection of copper with soil components, which influences its consolidation and migration? Technogenic influence on the residual fraction is difficult to assess. The results are of ecological importance, as they allow predicting the processes of transformation, migration and accumulation of soil components responsible for binding copper in the seasonal soils, and the possibility of secondary mobilization.

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Reviews

New book about Arctic – 'Directions of the projects in the high latitudes' (Novosibirsk: Science, 2011. 440 p.)

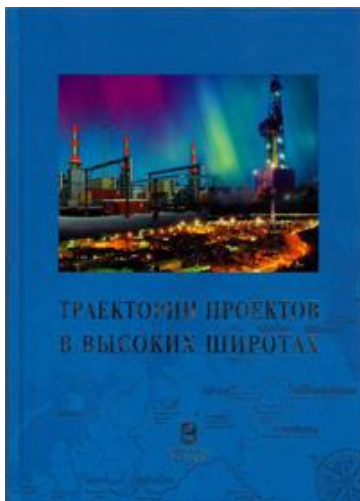


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Abstract

The monograph is reviewing, which has been prepared by the team of the researchers of the Institute of History of SB RAS.

Keywords: *Siberia, Arctic, the Northern Sea Route, state policy, exploration, development.*



Published a new book, prepared by a group of authors and dedicated to a very important and topical issues relating to the development and the development of the Russian Arctic and the Northern Sea Route, which from ancient times an important place in the development of the Russian state. The Arctic region and is now of great importance for Russia, not only because it is a significant part of its territory. Arctic is particularly valuable in that it has a great strategic and natural-resource potential, and we see how it is slowly becoming more and more important for the economic, technical,

technological and socio-cultural development of the state, since it is able to provide progressive development not only in the present but and in the future. The study of the historical past associated with the development of the Arctic and the Northern Sea Route, due both to the needs of the increment of scientific knowledge, and the need for understanding the historical experience and its use in contemporary social practice. Undeniable fact that in the history of Russia has always played a huge role space-geographic factors that cause substantial variability and development, and the specific nature of the relationship between the center and the regions.

The book for the first time in the historiography on the extensive source base researched and compiled the complex and poorly understood problem of the evolution of the regional policy in the northern territories over a long historical period. The main emphasis on the study of the problems of continuity in the strategy to protect the Russian interests in the northern areas and the preservation of the Russian state status as a great power of the Arctic. Authors were able to

study the processes of learning and the development of the northern expanses of Russia, to show how the circumstances evolved human being there is to many factors formed a special type of attitude of Russian society to the north - large and resource-rich region of the country, at the same time while it is in severe natural and climatic conditions. At the same time pointed out that with the development of science and technology and civilization progress related to the development and habitation of the northern territories varied both government officials and ordinary Russians.

Especially significant changes occurred in the XX century, when large-scale economic development of the northern territories has become a matter of the national importance. On the basis of accumulated knowledge and understanding of earlier periods as early as 1920-1930-ies in the Arctic began to take shape quite costly government measures mobilization measures aimed at active industrial and transport construction, the development of the Northern Sea Route as an important transport artery of the USSR. In this case all the shares held in the forefront of national interest. The Arctic region to the central government in the Soviet period, was a determining factor in public policy.

The authors examine the past, current and the future design of the relationship "region - the center" at the highest possible analysis. There is a strong leading role of the state in the exploration and the development of high-latitude areas with the extreme climatic and geographical conditions. Shows that over the centuries has changed as the information base strategic aspirations of the state, and the scientific and technical capacity to support them.

The scientific, technological and civilization progress is extending the implementation of major pioneering projects in the northern regions of Russia, which is not always carried out as part of their social welfare. Development of the new territories in the high latitudes, for objective reasons requires mobilization decisions, sometimes accompanied by coercion and outright violence to a historically short time to achieve real results. The book noted that the Soviet government in carrying out its strategic plans in 1930-1950-s of the various methods of coercion. Significant place in the formation of human resources in the northern territories was given the use of prison labor and other convicts who had to have participated in the industrial and transport construction, development of mineral resources, forestry, etc.

The excursion into the history gives the reason the authors believe that the Arctic is as an organic part of the Russian Federation, such as Siberia and the Far East. Disputes about the ways and methods of its habitation and the development have more than a century. They do not cease at the moment. At the world level, discussed the fate of the Russian Arctic territories, the pro-

spects for their economic, social and cultural development. Author team shows steady long-term integrated views of supporters of the Arctic in the Russian context.

The researchers came to the conclusion that there is an urgent need to develop a new model of the public policy with regard to Russia's regions, including the Arctic. They believe that the basis of the updated state policy in the Arctic could become the main strategic documents adopted in recent years, the President and the Government of the Russian Federation for the period up to 2030. They suggest the accelerated socio-economic development of the northern territories, which must be used predominantly latest energy saving technology, the most advanced manufacturing solutions. This approach aims to strengthen not only the economic but also the geopolitical situation in the Arctic, to give new impetus to its promising development within the Russian state, which is very important in a globalized world ties and relationships in which there is the view that the "compression" of extensive Russian territories primarily through Siberia and the North. In response, the authors of the monograph considers social and economic potential of Siberia as the real and the only possible basis for enhanced economic activity in the Arctic.

The monographic work has been done in the genre of interdisciplinary research, which increases its value. Interdisciplinary studies make it possible to combine fundamental and applied significance of scientific developments. The methodology allows the various sciences as both explore the various aspects of such complex objects and phenomena that are generally identified the concept of "Russian Arctic zone" and identify general patterns of technological and institutional change in the region for a considerable chronological period. Authors were able to solve complex problems, organically reunite the results of historical, geographical, economic and mathematical research, to show how they can work and complement each other, in order to simulate the different processes of the social development.

In the general monograph reflects the important and urgent problems of the social and economic history of Russia connected with the study and the development of its Arctic spaces. Researchers have successfully challenging the scientific problems, and at the same time just published an interesting and informative book. Her living language edition gives original - orthogonality, turn to the scientific research into the subject of a fascinating read for anyone interested in the history of the Fatherland. Text provided with numerous maps, which are designed to help the thoughtful reader to dive in the routes of the development of Siberia and the Arctic spaces. In addition, the book has an application in the form of the chronograph that reflects the presence of the main landmarks of the Russian state in the Arctic. Informational value of the study gives a comprehensive list of references of works on Arctic issues.

Thus, it can be considered as a real success the publication of such a comprehensive general work, which clearly represented the past, present and future of Russia and its northern latitudes.

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Abstracts, keywords

Geopolitics

© Zalivsky N. P. The mission of Russia – is to be an example of building the world power with the optimal social – cultural model of the development of the nations

The article defines the futurological capabilities of Russia to the world's leadership in the social modernization of the society. As hypotheses for the strengthen of the Russian's geopolitical situation in the long-term historical process is named, as the stimulation process of the unitarization of the government, evolutionary modernization of the national and ethnic portrait of the Russian society and the formation of the associated sozium with the culture of the union historical existence. The author emphasizes that the international leadership of Russia in the social development of mankind is based on the leading social policy of the country, its peoples (ethnic groups) and the Russian society.

Keywords: *futurology, social mission of the Russian Federation, future of the XXI–XXXI century, the assimilation of nations, national elites, diagnosing of the problems, unitarization, the symbiosis of the ethnic cultures of Russia, the Russian society.*

© Lukin Y. F. Stockman can't be frozen

It is analyzed the situation of the development of the Stockman field in the Arctic region, which is happened in 2012.

Keywords: *Arctic, shelf, Gazprom, Stockman, gas.*

© Portsel A. K. Russia remains on Shpitsbergen

The article considers the perspectives of the expanding of the national social-economic activities on the archipelago by the decisions of the government committee on the Russian presence on Shpitsbergen (December 2011).

Keywords: *Shpitsbergen, Barentsburg, Arctic coal, the strategy of Russian presence on Shpitsbergen.*

Sociological sciences

© Akimova Z. I., Nikonova L. I. Museums and ethno tourism in the promoting the ethno culture of the Arctic inhabitants in the social space of the North: to the problem through the research experience of Mordovia Diaspora in Siberia and the central part of Russia

A major part of the museum as a center of preservation of ethnic cultures of the peoples of Russia belongs in ethno tourism. During the expeditions to the Permskiy region, Vladimir and Moscow regions, we studied them in order to collect materials about Mordovians. According to the 2002 census, the number of Mordovians in the Arkhangelsk region was 944 persons in the Murmansk region – was 2 479 people. We hope that together with ethnographers' educational institutions and museums of the northern region, we can begin to study the Mordovian diaspora in the social space of the Arctic and North.

Keywords: *ethno tourism, museums, social space, Arctic, North Mordovians, Diasporas, Siberia, and Central Russia.*

© Boyakova S. I. Russian old-settlers Yakutia: culture and landscape

Of the example of the areal groups of Russian old-settlers (russkoustyintsy, pokhodchane, the Amga, the Lena and the Olyekma peasants) have been reconstructed the basic socio-economic parameters, has been highlighted the traditional image of the rural cultural landscape of Yakutia. Formation a culture of life-support Russian old-settlers in the region is seen as the result of the multivariate combination of natural and cultural complex in the peripheral area of the continuum.

Keywords: *landscape, ethnos, culture, the system of life supplies, nature-usage, outlook, Russian old-settlers, Yakutia.*

© Vinokurova D. M. Migration and family-marriage relationships – are the challenges of modern time: gender aspect (according to the sociological researchers)

The article is based on the sociological studies, found a tendency of reducing family of the family values, changes in the distribution of the family duties of spouses, the role of women in the migration in industrialization.

Keywords: *family values, unregistered marriages, family roles of spouses, marital experience, the role of women in the migration.*

© Vinokurova L. I. Russian woman in the rural Yakutia in the second half of the XX century

Russian women of Yakutia in the rural areas of the second half of the XX century were a social group with a difficult complex structure. The separate interest is Russian women who came to work on a governmental contract. In daily life, they had to overcome the social and cultural challenges, including gender. Successful socialization of Russian women in the villages of Yakutia promoted general political factors, as well as regional ethno-cultural traditions.

Keywords: *social history, gender, Russian daily life, North, Yakutia.*

© Nazarenko A. P. The problem of the social exclusion of the working emigrants in the light of the development of the Arkhangelsk region

This article analyzes the reasons of the appearance of the problems of the social exclusion of the working migrants, it is put emphasis on the positive role of labor mobility in the light of the development of the Arkhangelsk region.

Keywords: *social exclusion, labour mobility, Arkhangelsk region, life level, development.*

© Fillipova V. V. Indigenous people of the North in the Arctic area of Yakutia: geo-informational research of the settlement in the XX century

It is showed the dynamics of the number of the indigenous people of the North of Yakutia, according to the lists of the Population of the twentieth century and it was constructed the maps of the settlements with GIS technologies.

Keywords: *indigenous people, GIS technologies, Yakutia.*

Economy, management

© Andrianov V. A. Formation of the transport infrastructure of the Russian sector of the Arctic in the XXI century

Large-scale of the economic development of the North and the Arctic zone of Russia must be preceded by the establishment of the transport frame, consisting of two latitude and six radial strategic railways. For the possible effective interaction between different modes of transport only in the north of the country should be established (or reconstructed) to ten major ports, which may be the key hubs in the development of the Arctic. These sites should be focused on the state logistics centers. Forming the base of the transport framework creates opportunities for accelerated and efficient development of thousands of large mineral deposits in Siberia, the North and in the Russian Arctic.

Keywords: *geopolitics, the transport capacity of the Northern Sea Route, the optimization of the transport networks and resources and the efficient use of the advantages of different types of transport, the transport frame of the North of Russia and Siberia, the strategic transport hubs, state logistics centers.*

© Timoshenko A. I. Projects of the territorial and productive complexes in the Arctic: the soviet experiment and the modern situation

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

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

Geography, biology

© Kupershtoh N. A. The researchers of the Melnikov Permafrost Institute of SB RAS as the basis for the modern 'Arctic breakthrough'

Scientists at the Permafrost Institute of the USSR made a comprehensive research in the Arctic and the Arctic shelf in the 60-es of the XX century. For several decades monitored the unique natural phenomena inherent in the Northern Territory. On the basis of these data, as well as through the work of the Institute of the modern expeditions with foreign participants was possible to made 'Arctic breakthrough' and the construction of a powerful research station on the island Samoilovsky.

Keywords: *Permafrost Institute, the research in the Arctic and the Arctic shelf, academician P. I. Melnikov, professor M. N. Grigoriev.*

© Repnitsyna O. N., Popova L. F. The transformation of the mobile forms of the copper in the seasonally frozen soils of the Arkhangelsk region

Studied the accumulation, migration and transformation of the mobile forms of copper in different types of soil in Arkhangelsk. In urban soils, as opposed to natural, not only changes the relationship of transformational forms, but the nature of the relationship of copper with soil components. The influence of technogenic to consolidate copper in the soil and on its possible transition conditions change to the neighboring environment.

Keywords: *copper, kulturozem, replantozem, urbanozem, transformational form.*

Reviews

© Elert A. K. New book about Arctic – 'Directions of the projects in the high latitudes' (Novosibirsk: Science, 2011. 440 p.)

The monograph is reviewing, which has been prepared by the team of the researchers of the Institute of History of SB RAS.

Keywords: *Siberia, Arctic, The Northern Sea Route, state policy, exploration, development.*

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