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IDENTIFICATION OF THE OPTIMAL CONDITIONS FOR FUNCTIONING OF THE ARCTIC MARINE SERVICES MARKET

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Abstract. The article analyzes the prerequisites for the development of the Arctic sea-market service, the main stages in the modernization of infrastructure of the Arctic transport system, as well as barriers to the exploitation of the Northern Sea Route.

Keywords: *Arctic, Strategy of development, Northern Sea Route, management model, optimum conditions.*

Introduction

Today Arctic is in the centre of politicians', economists' and scientists' attention, firstly drawing attention to unutilized resources and unlimited vastitude for realization of the most challenging projects. Nevertheless, specialists acknowledge that Arctic is considered to be the high risk area because of its natural and climatic conditions' characteristic, character of its territories' industrial development and remoteness from the main industrial centers [1]. Conditions of market growth development of the maritime Arctic service in terms of the world globalization are studied in the article. Main stages of formation and modernization of Arctic transfer system's infrastructure and also barriers for exploitation of the Northern sea route are determined. For building a scenario forecast of the services market's development and a risk assessment of its business exploitation new methods must be suggested. These methods must be based on the elements of mathematical model method and self-optimizing control.

Perspectives of the Northern Sea route usage

It is mentioned in the "Development strategy of the Arctic zone of the Russian Federation and national security for the period up to 2020", that imperfection of the transport infrastructure, its maritime and continental components, aging of the ice-routing fleet and lack of small aircrafts' resources are considered to be basic risks of the social-economic development of Arctic zone. Though the main hopes of the problem's solution are related to revival of Northern sea route[1].

For the purpose of modernization and development of Arctic transfer system, which guards against loss of the Northern sea route as the only main traffic artery of the Russian Federation, it is provided in the "Development strategy…"

a) development of the only main Arctic transfer system of the Russian Federation in the capacity of the national maritime traffic artery, which is oriented on the year-round functioning, comprising Northern sea route and gravitating to it meridional river and railway communications, and also airport network;

b) restructurisation and cargo traffic volume growth through the Northern sea route, including account of State support of the construction activity of icebreaker, wrecking and auxiliary fleets, and also development of coast infrastructure;

c) improvement of the Russian regulatory framework concerning state regulation of navigation throughout the Northern sea route's water area, promotion of its safety, tariff regulation of services in the area of icebreaking and other ways of supporting, and also development of insurance mechanisms, including required insurance;

d) improvement of organizational structure of management and provision of the Russian Arctic zone navigation's safety;

e) modernization of Arctic harbors and build-up of new harbor-industrial complexes, realization of dredging operations on Arctic River mains;

f) development of effective system of Arctic region's air services.

From the viewpoint of economic effectiveness the perspective of intensive usage of the Northern sea route is appreciated by experts in different ways. It is worth mentioning that water carriage still plays an important role and occupies 60-70 percentage of the whole world cargo turn-over. Air carriage can be considered to be an alternative to water carriage, though the competitive ability of the water carriage is higher, which is based on higher cost of air carriage and a low total quanta of cargo traffic [2].

As a rule, six main factors, which are used for initial estimate of availability one or another means of transport with conditions of concrete carriage (acceptance of a permanent solution must

[1] Development strategy of the Arctic zone of the Russian Federation and national security for the period up to 2020 URL: http://base.consultant.ru/cons/cgi/ online.cgi?req=doc;base=LAW;n=142561 (accessed 06.10. 2013).

be substantiated with cost-benefit analysis), are marked. When appreciating them according to the five-point grading scale (the best point corresponds with one), we can see, that with factors carriage charge and capability to transport different cargoes water carriage is considered to be the most effective (table 1). Though, in modern conditions, such factors as safety of delivery timekeeping and time of delivery play also the most important role.

Table 1

Factors, which influence means of transport's choice

Means of transport	Factors					
	Time of delivery	Frequency of shipment	Safety of delivery timekeeping	Capability to transport different cargoes	Capability of carriage cargoes anywhere	Carriage charge
Railway	3	4	3	2	2	3
Water	4	5	4	1	4	1
Auto	2	2	2	3	1	4
Pipe-line	5	1	1	5	5	2
Air	1	3	5	4	3	5

Analysis of world traffic volume in the second half of the 20th century (table 2) confirms the water carriage utilization efficiency. It suggests a stable growing trend (pic. 1).

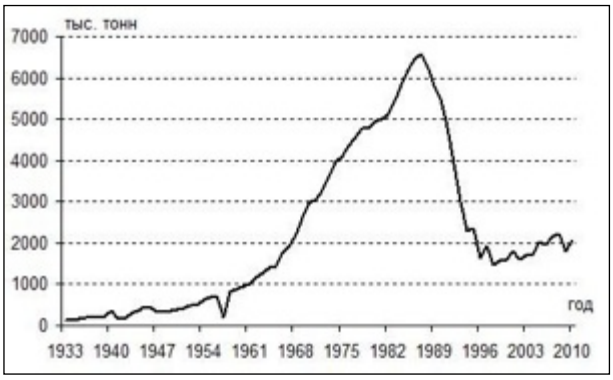
Table 2

Water carriage cargo turn-over and traffic volume in the 2nd half of the 20th century

Year	Cargo turn-over, bl.t/km	Traffic volume, mln. t.
1950	3570	550
1960	7500	1110
1970	18145	2840
1975	23300	3050
1980	32160	3650
1985	27500	3190
1990	28100	4000
1995	29015	4650
2000	31000	5100

Pic. 1. Dynamics of sea freight in the second half of the twentieth century.

Northern Sea Route (later – NSR) is anyway considered to be the shortest water traffic artery between European part of Russian Federation and the Far East. According to the specialists' research, it lets to save the shipping route in comparison with Southern Route through Suez Canal on 3860 marine miles or on 34% [3]. When analyzing the volume of annual cargo turn-over for the period 1933-2010 we can notice periods of intensive growth and fall (pic. 2).

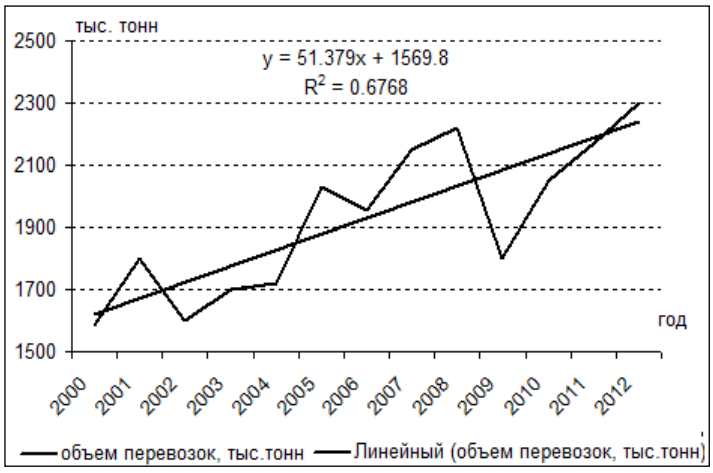


Pic. 2. The volume of annual shipments along the NSR during the 1933-2010 biennium

Such a periodicity is caused by the fact, that NSR – a backbone of the Arctic Traffic Infrastructure (then – ATI) – was sustainable before the year 1991 and cargo turn-over (incl. ridership) achieved 4 mln. tones of cargo per year. Transition toward a market economy influenced all the components of NSR. Privatization resulted in friction of the main subjects, implemented in organization of its exploitation. Foremost it concerns to ocean companies, ice-proof fleet and docking facilities. As a result of these crisis developments the volume of carriage through NSR fell by more than one half in comparison with the year 1991. Today ATI is used for

less than 50% of capacity, number of icebreakers fell from 16 in the year 1995 to 12 in the year 2000, and cargo shipping of ice reinforcement fell by practically one half.

Nevertheless when analyzing the dynamics of NSR carriage from year 2000, we can see some positive trend (pic. 3).



Pic. 3. URL: http://www.transportrussia.ru/transportnaya-politika/sevmorput-vektor-razvitiya.html

Many countries, who are interested in a cheap fright, encourage the idea of usage NSR as a transit artery. According to the words of a director of Department of State Policy for Marine and River Transport Russian Federation K. Palnikov, 631 requests for passing through Arctic routes were sent in the administration of Northern sea route from the 1st of January to the 20th of September 2013. The most part of requests were sent for navigation of small coastwise navigation[2]. Earlier, assistant director of Atomflot S. Golovinsky noticed, that 2013 enterprise got more requests for carriage through Arctic waters from foreign companies than from Russian [4]. China begins to play an important role in life of Arctic region — Chinese cargo ship was the first ship, which arrived in Rotterdam when using Russian Arctic sea route. Moreover, it was the first Chinese commercial carriage through Northern sea route. It took 35 days to pass the route in 15 000 km. Though the traditional route through Suez Canal and Mediterranean Sea continues for 48 days[3].

Consequently objective preconditions for the future growth of transit traffic through NSR are formed. Creation of through transportation corridors for supplying transit cargo traffics with

[2] From the beginning of 2013 631 requests for passing through Arctic routes were sent to administration of the NSR. URL: http://sdelanounas.ru/blogs/41301/ (accessed 10.06.2014).

[3] China begins to use NSR for commercial purposes. URL: http://severnash.ru/ economics/ sevmor-put/ 8074-kitay-nachinaet-ispolzovat-sevmorput-v-kommercheskih-celyah.html (accessed 25.06.2014).

yield of NSR could let to give a full load of work to Atomic main icebreaker fleet of Russian Federation and to get considerable currency earnings. For foreign companies it could mean a substantial reduction of time and charge of carriage between Europe and Asian region.

Predicting the future development of NSR we must judge by necessity of creation of the-year-round functioning Northern Transportation Corridor (NTC) – Russian national transarctic marine artery from Murmansk to Petropavlovsk-Kamchatsky. Seasonal Arctic transportation corridor has practically no future.

Nevertheless, the common strategy of the future development of Arctic transportation system will be determined by forecasting volume of annual carriage through NSR. Forecast of annual NSR carriage volume is given in table 3 [1].

Table 3

Forecast of annual NSR carriage volume up to the year 2020.

Year	Analytical forecast (th. tonnes)	Judgmental forecast (th. tonnes)
2012	2237,73	2300
2013	2289,11	2600
2014	2340,49	2800
2015	2391,86	3000
2016	2443,23	3500
2017	2494,62	4000
2018	2546,00	4500
2019	2597,38	5000

Experts' forecasts, which characterize the rate of gain of carriage through the NSR up to the year 2020, are ambiguous. According to some sources, carriage of private and transit freights can grow tenfold [5]. According to forecast of specialists in Central Institute for scientific research of maritime fleet, an annual output of freight carriage through the NSR could grow up to the year 2020 one hundredfold and will amount up to 65 million tones [6, V.I. Peresipkin].

NSR service market

Despite the evident profit of transit carriage through NSR, there is a number of unsolved problems and one of the main is lack of qualified and accessible marine service market. Following substantial barriers for cropping of business at the service market can explain the situation [7]:

a) High operational expenses which include icebreaker support (charges for which foreign ship-owners consider to be overestimated), high border administration and custom registration fees, rating up insurance and other extra risks
b) High investments, which will be oriented to buying or lease of specialized ice-class vessels (in winter — of substantial ice-class vessels) and tankers (only double-skin).
c) Underdevelopment of port infrastructure.
d) Opportunity of dumping prices imposition by Suez Canal's and Panama Canal's administration.
e) Bureaucratic barriers, lack of information.

Organization of commercially viable market of Arctic marine service is possible when removal all these barriers. First for it a port infrastructure must be developed, which will allow to refit ships in a proper way and to arrange the crew-exchange. Organization of traditional cargo traffics through the NSR must also be accompanied by continual monitoring of salvage service.

For analyzing dynamics of cargo carriage volumes through the NSR and for making a scenery forecast of possible development of service market, we can use elements of mathematical method approach and of self-optimizing control. Let's equate a process of cargo carriage volume change during some period of time ($\frac{dv}{dt}$):

$$\frac{dv}{dt} = f(p,x,y) - v(t)\cdot\xi(t) \quad (1)$$

where $v(t)$ — volume of cargo carriage through NSR, $f(p,x,y)$ — function, which reflects dependence of carriage through Northern sea route and carriage charge, quantity of cargo, organizations, who want to carry the cargo, $\xi(t)$ — function, which characterize probability of emergency event.

When investigating the forming of Arctic service market through the forming of corresponding enterprise we can see that as each enterprise it will possess factors of production (resources, human labor), which must intercommunicate [8]. To render services (in this case repairing service and technical assistance) with limited factors of production utility function must be maximized, by given resource level, which is expressed in quantitative characteristics of cargo carriage through NSR ($v(t)$).

Then the function, which expresses the volume of services $F(\boxtimes)$, depends on the cargo carriage through NSR volume ($v(t)$) and probability of emergency event ($\xi(t)$), that is

$F(v(t),\xi(t))$. It is also worth mentioning that not all the ships, which pass through NSR, experience emergency situations[4]. We can take this fact into account when including a terminal summand $\alpha \cdot \Phi(T)$, where α — some coefficient, which characterizes cost of repairs in a terminal time, that is when ships reach point of destination. As a time interval (T) we use interval, in terms of which carriage is being carried out (cabotage or international transportation). Currently cargo carriage is carried out only in "open water", which contains 4-5 months as usual. Nevertheless, many experts are of the opinion that for carriage volume gain globally it is important to overview the year-round functioning of NSR (that is T=365 days, or $T = 2\pi n, n \in Z$).

Consequently, objective functional or utility value functional is as follows:

$$\int_0^T F(v(t),\xi(t))dt + \alpha \cdot \Phi(T) \to \sup \qquad (2)$$

When choosing as a control parameter one of the considered factors, which influence the dynamics of the cargo carriage volume, for example, cargo charge, we will get the matter of the optimal process control of Arctic service forming. Evidently, cargo charge must be regulated at the national level and must not go over the fixed limit ($P_{\max}$), that is $0 \le p(t) \le P_{\max}$, by $t \in [0,T]$.

Analyzing the statistic data and using methods of statistically distributed data manipulation, and also theory of inverse problems we can get model parameters (1) and view of functional interrelation for objective functional (2), functions $f(p,x,y)$, $p(t)$, $x(t)$ и $y(t)$.

When using the theory of optimal management and methods of tabular integration we can get an approximate answer of the optimal management:

$$\int_0^T F(v(t),\xi(t))dt + \alpha \cdot \Phi(T) \to \sup$$

$$\frac{dv}{dt} = f(p,x,y) - v(t) \cdot \xi(t)$$

$$v(0) = v_0 > 0$$

$$0 \le p(t) \le P_{\max}$$

Variability of the main parameters of the model lets to get a number of decisions, which we can introduce in the way of scenery forecast.

[4] Information of marine fleet accident incidence rate and safety moves in navigation. URL: http://www.pac.mintrans.ru/Moryaki.doc (accessed 11.06.2014).

Conclusion

It is difficult to make forecasts of carriage through the NSR volumes, but we can surely confirm the increasing interest to this component of Arctic transport system on the part of companies, who consider the possibility of usage of NSR for transit traffic. They focus on following advantages: 1) fuel savings; 2) sailing duration reduction, respectively — cost savings on job compensation and charter of ships' reimbursement; 3) non-payment for canal dues (as through Suez Canal), but involving icebreaking dues; 4) no-queue state (as with Suez Canal); 5) lack of pirates' aggression risks.

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FORMATION OF OIL AND GAS CLUSTERS AND SPECIAL ECONOMIC ZONE IN THE EUROPEAN RUSSIAN ARCTIC

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Abstract. This article discusses the formation of oil and gas clusters in the European Russian Arctic, the Port special economic zone in Murmansk and the possibility of establishing an oil special economic zone, a balanced participation of the stakeholders

Keywords: *Russian Arctic, shelf, oil and gas,* clusters, *exclusive economic zone, stakeholders*

Introduction

This article analyzes problems of oil and gas clusters' creation and a special economical zone (SEZ) in Arkhangelsk and Murmansk regions according to the problems of hydrocarbon deposits' exploitation in Arctic. A practice of already existing port-based special economic zone in Murmansk, opportunity of oil SEZ appearance and a sustainable participation of all stakeholders in European pert of the Russian Arctic are on the carpet. Researches in this field are considered to be current because of the present situation in this area: after declaration of Sea of Okhotsk Shelf to be Russian, on the agenda appears a question about legal recognition of Lomonosov Ridge Shelf to be Russian one. Moreover, with the beginning of crude production on "Priraslomnaya" problem of shelf field development control becomes really current and it demands an urgent solution, including management problems and interregional cooperation.

Problems of Oil and Gas Field development in Arctic

Firstly, when studying this research, it appears a problem of volume of Arctic gas and oil resources determination, opportunities and challenges by Arctic exploitation in the European part of Russia. Fractional oil and gas content in world energy consumption will remain in gauge up to the year 2040 - 53,6% in year 2010 and 51,4% to year 2040, there with oil content will reduce from 32 to 27%, though gas content will increase from 21% in year 2010 up to 25% in 2040. In base case of world and Russian energetic development forecast up to the year 2040, global demand for liquid

fuel will increase by mean of 0,5% annually and will comprise 5,1 bln. tones, in other words it will increase 26%, notably oil and natural gas liquids will comprise from traditional sources 77% [1].

Oil prices will also remain unchanged. According to the statistic-analytic department of American Department of Energy estimates, oil price on trademark "Brent" will reduce a little – to 96 dollars pro barrel to year 2015, and later will spiral up and to year 2040 will amount 163 dollars pro barrel [2]. According to the Russian researchers' estimates, balance oil prices in 2040 will not derate 100-130 USD.

According to probabilistic ecological analysis of different greenalite rocks a group of USA Geological Survey (USGS) researchers within their research «Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle» again came to a decision that in the nearest future Arctic can become the biggest petroleum bearing province of the world. Common approximate volume of unexplored oil and gas reserves in Arctic is in the order of 413 bln. barrels of oil equivalent (b.o.e.) or of about 22% of common unexplored reserves of conventional hydrocarbon in the world.

In the light of this analysis an energy potential development of Arctic zone of the Russian Federation can be considered to be economically self-supporting and potentially productive. Russia has practically 15 bln. b.o.e. (9,4 bln. — in southern part of Barents sea and 5,3 bln. — in Enisey-Khatanga Bay). Speaking about non associated gas, pattern for Russia looks much better: 70% of common volume of Arctic non associated gas reserves is here (there are shelf reserves mostly in the southern part of Kara Sea and in the eastern part of Barents Sea) [3].

The problem here to be studied is following: all the estimates of hydrocarbon reserves in Arctic are conventionalized because deep-sea floor of the Arctic Ocean still considers being under explored. For Russia it is current mostly: «Russian shelf is characterized with extremely low degree of exploration — ten times less then American shelf of Chukchee Sea and twenty times less then Norwegian shelf. Coverage density with seismic experiments in the most long-range surface areas of Arctic seas, except Barents and Pechora seas, doesn't overshoot 0,15 km pro square kilometer, and of eastern — less than 0,1 km pro square kilometer. There will be no important discoveries

[1] Projected growth of energetic in the world and Russia up to 2040 / Institute for Energy Studies RAS and Analytical Centre affiliated to the government of Russian Federation. Available at: http://www.eriras.ru/files/prognoz-2040.pdf (accessed 16. 04.2014).

[2] International Energy Outlook 2013 // U.S. Energy Information Administration. July 25, 2013. Available at: http://www.eia. gov/forecasts/ ieo/ (accessed 11.06.2014).

[3] Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle. Available at: http:// pubs.usgs.gov/fs/2008/3049/fs2008-3049.pdf (accessed 16.04.2014).

without essential upgrading of shelf, but perspectives of large-scale exploitation are ranged over the year 2030»[4].

One of successfully implemented projects for today is exploitation of the reservoir "Prirazlomnoye". All in all during the year 2014 it is planned to produce not less than 300 thousand tones of oil, and after 2020 it is planned to come to a level of 6 mln. tones of oil per year. The first batch of oil with trading mark ARCO from "Prirazlomnoye" was landed on the 18th of April 2014[5]. But the development of the reservoir prompted strong protests by ecological organization "Greenpeace" and journalists in the West[6]. OAO "Gazprom" became the second company who could start commercial exploitation of oil-gas fields of the Russian Arctic shelf, where from the year 2003 OJSC "Novateck" extracts in Yurkharovskoe field at Tar Bay of Kara sea. Not less sensational but unfortunately left-off project was Stockman field in Barents sea.

An expectation from the broad-scale project of Arctic fields' exploitation is — appearance of new working places, building of infrastructure objects, gas infrastructure development in regions, input of foreign skills, increasing of consumer goods and services' production, tax revenue, funding of other fields and population growth [1, 2014]. Synergetic effect can also take place: a successful development of oil-gas exploitation can give an impulse to NSR development, which in their turn will influence the increase of hydrocarbon production. For a successful being of NSR following is important: production of more mild decision support system of state competent structure, working under creation of positive image of NSR, address work with potentially concerned business and state parties [2].

Though there is also a number of risks during Arctic field exploration: hard ice conditions, high possibility of iceberg appearance, which predetermines a constructive difficulty of maritime winning complexes; a short-term period of work on shelf (the so-called "weather window"), cargo-carrying technological hazards; susceptibility of the region's ecosystem, shelf's under-exploration; potentially high business expenses, its infrastructure's organization and protection against industrial accidents; difficulty of employees logistics for its life support. In this context a complex system

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[4] Minister of Natural Resources and Ecology of the Russian Federation Sergey Donskoy on the 15th of January addressed a meeting "About perspectives of continental shelf's resources development in Russia" under the leadership of Chairman of the Government of the Russian Federation Dmitry Medvedev in Novy Urengoy. Available at: http://www.mnr.gov.ru/news/detail.php?ID=130045& print=Y (accessed 16.04. 2014).

[5] A first oil of the Arctic shelf of Russia is dispatched. Available at: http://www.gazprom.ru/press/news/2014/april/article189137/ (accessed 19.04.2014).

[6] Greenpeace International head boards Gazprom Arctic oil platform. URL: http://www. greenpeace.org/ international/en/press/releases/Greenpeace-International-head-boards-Gazprom-Arctic-oil-platform/. Russia Embraces Offshore Arctic Drilling // New York Times: URL: http://www.nytimes.com/2011/02/16/business/global/16arctic.html? pagewanted=all&_r=0 (accessed 18.04.2014).

of shelf project assurance must constitute an integrated model of supply, transportation and turnover of staff in the places of work performance at all times from geologic exploration to exploitation and further transportation of hydrocarbons in considerable volumes in market places [1].

Organization of such a difficult system in the European part of the Russian Federation demands both financial expenses and other resources, creation of oil-and-gas clusters and special economical zones, but mostly it demands coordination of this work, effective management and balanced participation all concerned parties — stakeholders.

Oil-and-gas clusters formation in the European North of Russia

For effective exploitation of oil-and-gas fields in the western part of the Russian Arctic it is current a balanced participation of all concerned parties while conformance with priorities of the Russian national interests. Such an approach has a direct relationship to formation of oil-and-gas clusters in the European north of Russia in Arkhangelsk and Murmansk regions.

A conceptual framework of oil-and-gas cluster — is a State support on the regional level at least; group of companies who provide research-and-development and educational organizations; directly suppliers themselves; petroleum chemistry recycling facilities; services in icebreaking and tanker fleet, port infrastructure; exploration and oil producing companies [1].

We can notice a formation of sea oil-and-gas clusters in Arkhangelsk and Murmansk regions. A concept of cluster politics in Murmansk region includes signing of an agreement (memorandum) with companies and organizations of field clusters; creation of industrial, technological, transport-logistic and tourist-recreational parks with involvement of small and medium-sized businesses; creation of resource centers in field and territorial clusters with participation of educational establishments of higher secondary vocational education; buildup of complex investment plans of municipal structures development taking into account development of territorial clusters and parks in municipal structures of Murmansk region [3]. An Association of oil-and-gas industry suppliers “Murmanshelf” works here. In strategy of Murmansk region social-economical development up to the year 2020 and during the period up to the year 2025 it is supposed the creation of innovational infrastructure, including technological cluster of shelf exploitation providing in Arctic. Its specialty is that it is oriented on investment demand, inside Russia at first, born by means of hydrocarbons’ exploitation on the Russian continental shelf in Arctic. After 2020 this cluster must

become the chief supplier of services and staff for Arctic development in Barents region, thus achieving global competitive power[7].

8 years ago Association of oil-and-gas industry suppliers “Sozvezdye” (director – S.V. Smirnov) was founded, a regional cluster of suppliers and contractors of oil-and-gas industry really functions. Highly qualified engineering companies are engaged in the region, a base of these companies is kept, contacts with state and foreign oil-and-gas operators are strengthened[8].

A cluster approach gives an opportunity to focus not on different branches, but on connections between branches and companies and on presuppositions of competitive power, thus on development of the system of factors of production and business struggle, reduction of transportation costs, increasing of workforce productivity and achievement of another system advantages from improvement of changes between companies and fields. It is considered to be the biggest advantage of cluster approach [4].

Pic.1. A. Fadeev [1]. URL: http://russiancouncil.ru/common/upload/arlec19.jpg

A cross-border cooperation and international practices usage played its positive role in creation of clusters in the European north of Russia. For example, Norway invited specialists and experts, executed agreements with foreign companies, but all the researches and scientific research

[7] Strategy of Murmansk region social-economical development up to the year 2020 including the period up to the year 2025. URL: http://minec.gov-murman.ru/content/strat_plan/sub02/index.html (accessed 11.06.2014).
[8] SOZVEZDYE: publication for oil-and-gas industry suppliers, no. 19, 2014.

results during cooperation became its intellectual property, what was captured in country's legislation, as well as any foreign company, which came to Norway must hire on different stages from 30 to 80% Norwegian suppliers. Today Norway is considered to be one of the leaders of oil-and-gas industry. Norwegian experience is passed to Russian companies within the associations of oil-and-gas industry suppliers "Sozvezdye" and "Murmanshelf" during special seminars, organized by Norwegian party. These association put together both foreign companies, representatives of small and medium enterprises, that's why we can speak of clusters' creation based on these two associations [1].

The importance of clusters and cluster politics for Russian Arctic includes its opportunity to infuse scientific character for territory development, to encourage diversification of the northern economy, to contribute to transport, energetic, communicational infrastructure and to small and medium enterprises development. One of the advisory documents on realization of cluster politics in the North is "Methodical recommendations on realization of cluster politics in the northern subjects of the Russian Federation"[9]. A cluster approach is especially important for development of Arctic shelf fields, because companies have to use cluster potential, including technology and technique, basis of geological prospecting works, infrastructure objects and social development of regions [5, 2009]. Creation of special economical zones when cluster approach usage is also current.

Port special economic zone in Murmansk

Special economic zone — a part of territory in Russian Federation, which is appointed by the Government of the Russian Federation and where special regulations on pursuit of income generating activities take place, and here it can also be applied formality of duty-free zone [10]. Particular, free or special economic zone (PEZ or SEZ) — one of the types of financial resources involvement in border districts, which comprises a special terminated territory with special legal position according to remaining territory and privileged economic conditions for national and/or foreign businessmen.

According to the law No 116FL— on the territory of the Russian Federation following special economic zones can be created: industrial, technological-innovational, tourist-recreational and port. 2006 for realization of legislative draft it was created OJS "Special economic zones", 100% of

[9] Methodical recommendations on realization of cluster politics in the northern subjects of the Russian Federation / Committee of Soviet Federation FA RF of North and minorities. Moscow, 2008.
[10] Federal law of the Russian Federation from 22nd of July 2005 r. N 116-FL // Rossiyskaya gazeta. 2005. 27th of July. Federal issue № 3831.

its capital stocks belong to state. Today OJS "SEZ" through making of subsidiary companies, sister branches and taking part of supervisory committees control 17 special economic zones of four types, when being the biggest developer of industrial and innovational parks in Russia. From 2006 to 2012 in special economic zones in Russia came more than 340 investors from 23 countries. Volume of declared by residents' investments compounds more than 400 bln. rubles or 13 mln. dollars [11].

Today one of the most interesting for research of special economic zones is considered to be the Port special economic zone of Murmansk City. It was created after signing an Agreement for creation of port special economic zone (PSEZ) "Murmansk" on the 17th of November 2010 by Ministry of Economical Development of Russia, administration of Murmansk region, Murmansk City and Kola district of Murmansk region. A building of container terminal, modernization of already existed and creation of new port capacities for powdered and liquid cargo reception, transshipment and embarking. Moreover, fit-up of boring rigs is possible, what plays an important role for successful reclamation of oil-and-gas shelf fields. Investors of port SEZ "Murmansk" got tax and customs privileges, and also involvement to infrastructure objects. Regularity of tax privileges is guaranteed for investors during all the period of special economic zone existence[12].

Though the delay of Stockman exploitation and lack of enough money in region's budget for creating an engineering infrastructure led that in 2013 there were no residents in PSEZ. It managed to prevent the liquidation of PSEZ by regional authority by reorientation it for fish processing. Representatives of Fishery branch welcomed such a decision because reorientation of PSEZ will liven Murmansk port and fish processing. Though the representative of the Institute of Demography, Migration Policy and Regional development Yury Krupnov took a dim view of that fact: "The problem is connected with the fact that in both oil-and-gas and fishing complex there are no strategic investment projects"[13]. Thus, specialists recommend developing the strategy of Russian North development, which contains concrete projects with funding, what usually put aside.

Murmansk can be considered to be an outpost in Arctic exploration in Russia, perspective and promising region according to energetic, trading, war-strategic and political branches.

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[11] What is offshore and Russian experience in this way // RIA Novosti. URL: http://ria.ru/spravka/20130321/928406561.html#ixzz2zE01DidU (accessed 14.04.2014).

[12] An agreement of PSEZ "Murmansk" creation is signed / Site "Special economic zones". URL: http://www.russez.ru/press/news?rid=24811&oo=1&fnid=68&newWin=0&apage=1&nm=109011&fxsl=view.xsl (accessed 14.04.2014).

[13] Fish displaced gas. URL: http://www.rg.ru/2014/03/04/riba.html (accessed 23.03.2014).

The exploitation on the Russian shelf is usually done by OAO “Gazprom” and OAO “Rosneft” together with the state participation, who provide among other state insurance from risks, what is considered to be one of the key factors during exploitation. Participation in exploration of Arctic fields mostly by governmental companies supply economic safety of the Russian Federation in Arctic, and in some way it prevent the opportunity of foreign countries’ economic initiative interception. At the same time there is still a problem of usage of modern technologies and positive practice of the world community in the branch of shelf exploitation, in cluster approach and investment opportunities of private business, which could be involved by tax privileges or other preferences for the better realization of a project. Summarizing all the written before, we can make a conclusion, that there are currently not enough foundations for functioning of a special oil-and-gas economic zone.

Balanced participation of stakeholders

As the main stakeholders in the European part of Russian Arctic we can name Arctic regions and municipal structures, formed by them oil-and-gas clusters and special economic zones. Murmansk and Arkhangelsk regions for creating of oil-and-gas clusters objectively become not only partners, but also competitors for the base supply of Arctic hydrocarbons’ exploitation. “Murmansk and Arkhangelsk apply for the role of the capitals of new oil-and-gas provinces because they are situated near raw hydrocarbon deposits, possess intensive infrastructure and have a number of geographical advantages, which let them appear in the focus of oil-and-gas projects operators’ attention”, — underlines A.Fadeev, Head of Department of production support LLC “Gazprom-Sahalin”, expert RSDM[1]. Experts consider Murmansk to be more promising port when shift of hydrocarbon products. Potentially products from different fields of Arctic seas can mount up in Murmansk and then with the help of special tankers be transported on world consumer markets. Moreover, a project of creation of crude oil line from Siberia to Murmansk didn’t lose its perspectives. Congestion of railway for Murmansk region can be disadvantage (the main source of raw transportation from shelf) because of its usage for black strap transportation in the region [1].

Arkhangelsk region has rather big competitive information in such branches as shipbuilding and ship repairing, the region is gas-fired, and railway is loaded less. But sea port of the Arkhangelsk region is considered to be less hospitable from the point of view of logistic operations, navigable depth and price of services, and functioning of all transport-logistic infrastructures. Naryan-Mar, Varandei in Nenets Autonomous Area are more prosperous for staff transportation.

Рис.2. Fadeev A. [1]. URL: http://russiancouncil.ru/common/upload/arlec4.jpg

Another severe problem is a balance of state and private oil-and-gas companies' participation in Arctic fields' exploitation. Question of private companies' licensure for working at the Arctic shelf was discussed at the end of 2012 – beginning 2013. But currently this issue is left aside because of difficulty of investment guarantee in shelf exploitation for private companies[14]. Deputy PM of the Russian Federation A. Dvorkovich considers state corporations to be chief participants of shelf projects, but suggestions of under what conditions and private companies could gain clearance. Foreign companies will be involved as partners, but not as licensers' owners[15].

Such an approach is more balanced because of importance of appropriation of great funds for Arctic region development, and private companies not always possess enough funds. However Russian Federation's control over Russian part of Arctic is maintained, it also guarantees political and economic safety. At the same moment it is important to remember about the problem of modern technologies' and world practice usage while shelf exploitation not to repeat foreign mistakes and to provide works' optimum efficiency on Arctic shelf.

[14] Peskov: it is difficult to invest in private companies for shelf exploitation. URL: http://ria.ru/economy/20121019/904363599.html (accessed 23.04.2014).

[15] Dvorkovich A. Foreign companies will be involved in shelf exploitation as Russian State companies' partners. URL: http://quote.rbc.ru/news/fond/2013/01/22/33866524.html (accessed 23.04.2014).

A great volume of investments and existence of political will is needed for social-economic development of Arctic zone in Russian Federation because each project in Arctic is usually accompanied by a number of ecological, transport-logistic, infrastructural, financial and social threats. Development of Arctic region is considered to be economically, politically and socially ambitious project. Though during the turf fights there is an intense competition with both foreign stakeholders on a nationwide level. So, Canada sent an application in the UN about expansion of Canadian shelf in Arctic, including there also North Pole[16]. China constantly enlarges zone of its interests, in May 2013 it achieved a status of Arctic Council permanent observer. China actively develops its own icebreaking fleet, concludes contracts with Russia and Iceland on joint development of mineral recourses and scientific investigation of Arctic[17].

In the context of sanctions, temporary freeze connection in Arctic Council because of return of Crimea back in Russian Federation and usage of USA and NATO instruments of Cold War, implementation of economic and political safety in Arctic region becomes more current. Up to the end of 2014 a new war structure will be created in Russian Arctic, which will include Northern Fleet, Air Force establishment, Air defense, Arctic brigades and regulatory bodies. This structure, created for Arctic regions of Russia safety, will be named Northern Fleet – Consolidated Strategic Command (NF-CSC). Chief of the Northern Fleet, who reports to Minister of Defense, will lead this new war structure[18].

There are also a number of problems in sustainable and balanced development of Arctic region. And it suggests further continuance of research.

Conclusion

Perspective of regional clusters' appearance in the European part of Russian Arctic is overviewed and some current problems of oil-and-gas exploitation on the continental Arctic shelf are analyzed in this article. The main conclusion is that creation of a modern state governance model in Arctic supposes a balanced participation of all concerned parties – stakeholders in Arctic fields' development, including federal, regional and municipal government authorities, business organization, scientific and educational establishments, creation of oil-and-gas clusters in Arkhangelsk and Murmansk regions, while providing economic and political safety of Russia.

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[16] Canada laid a claim to the North Pole. URL: http://ria.ru/arctic_news/20131210/98308 9861.html (accessed 23.04.2014).

[17] The ice moved. URL: http://www.rg.ru/2013/05/31/led.html (accessed 23.04. 2014).

[18] There will appear a new war structure in Russia – «Arctic» leadership. URL: http://www.vesti.ru/doc.html?id=1293425 (accessed 23.04.2014).

A question of creation of federal and interregional structures, who will be ready to provide coordination and progress of all this work in Russian Arctic, interconnection of field ministries and departments, still remains open. A question of creation of a balanced management of oil-and-gas exploitation in the western part of Russian Arctic model still isn't depleted.

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PROBLEMS OF RATIONAL ISLAND MANAGEMENT IN THE ARCTIC

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Abstract. This article reports on the main environmental challenges for northern insular territories. Here you can find the national approaches to these problems, with possibilities of regional cooperation in universal island policy implementation with regard to ecological limitations being specified.

Keywords: *Arctic islands, island territory, regional policy, efficient island exploitation, regional cooperation, regional policy, northern islands, sustainable development.*

Introduction

A considerable part of planet's insular territories is represented by insular territories of Arctic region countries' territories [1, p. 60]. An ever-increasing importance of region's islands defines actuality of research. In particular, creation of a special economic zone and continental shelf around the islands, situation in strategically important parts compensates difficulties of it's reclaiming. That's why states of the region are interested in appearance of sovereignty over the islands, and in substantiation of state presence on their territories, what can be gained by the way of their rational politics of the management.

This article analyses main ecological problems, which northern island territories possess, national strategies for solving these problems and opportunities of regional cooperation in realization of a universal island politics, including ecological limitations.

Social-territory characteristic of northern islands

Overwhelming majority of Arctic countries' islands is situated in water zone of the Arctic Ocean (AO), which is considered t be the most insular according to its area, and deserves a second position after the Pacific Ocean in its quantity. The biggest Arctic Islands and archipelagoes are Greenland, Iceland (bordering the Atlantic Ocean), Canadian Arctic Archipelago, Spitsbergen, Frantz Josef Land, Novaya Zemlya, Severnaya Zemlya, New Siberian Islands, Wrangel Island, Solovetsky Islands, Vaigach Island and others. A common square of region's islands contains about 4 mln. square km [2, p. 14].

As the element of territorial structure of a state, northern islands (except Iceland) are a specific removed periphery as part of one or another country of a region. Because of it they usually don't enter the main format of order of administrative-territorial regulations and can have special control procedures, as for example Faroe Islands in Denmark or Aland Islands of Finland. Populated islands unite monoorientation of economy, thus extraction, processing and export of seafood, existence of common problems and development specialties. Preference of a particular administration approach is usually achieved by presence of these islands as part of a country. Thus, for Russian Federation and USA historically it was usual a war-strategic islands' development. Norway leads a politics of scientific islands' development, and Denmark islands include great environmentally protected sites. Canada uses all the approaches and moreover this country is considered to be an initiator of formation of islands' territories legal confirmation.

With that, a complex of northern island territories appears as a united area while being an object of ecological politics.

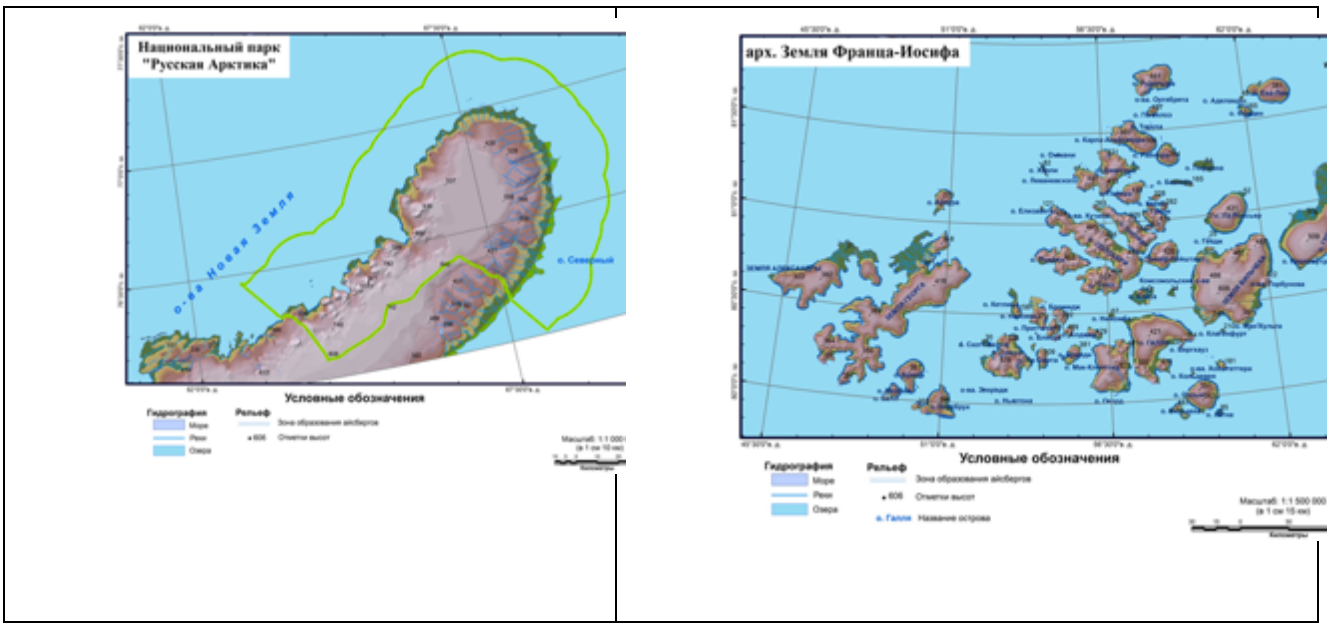
Politics of a rational island-usage in the Northern countries

For island territories it is characteristic an existence of unique ecosystems, which are characterized by being of difficult and fragile interrelations, high-scale expansion of endemics, which becomes as a result of its isolation from the continents. In relation to Northern countries the following statement is right, that low temperatures of ocean waters and rather poor florula leads there to appearance of ecological crisis.

Some Northern Islands have a special specialization and are used as year-round or seasonable inhabitation of animals and birds. For example, Wrangel Island represents a singular importance for preservation of a white bear population. That's why many great and small island territories have a right to be proclaimed as natural areas under special protection with different status.

Creation of natural areas under special protection in the northern islands will give an opportunity to save unique natural complexes with all its components. One of the first Natural areas of preferential protection became a national park of Arctic Islands, founded 1926 on the island territories of Canada. It has not only environment-oriented importance but it also add to the country's strength on these territories [3, c. 343]. One of the youngest NAPP is considered to be "Russian Arctic", founded 2009. It includes northern part of the island of the Northern archipelago Novaya Zemlya with adjoining islands. In December 2010 FSBO "National park "Russian Arctic" achieved under its supervision the most northern territory of Eurasian land — a state nature re-

serve of a federal significance “Franz Joseph Land”, which was founded 1994 [1].



Pic. 1. URL: http://www.rus-arc.ru/Content/images/Territory/Map2.png;
http://www.rus-arc.ru/Content/images/Territory/Map.png

An entire preservation of an island ecosystem is impossible without a continuous coastal belt, its key element, realizing at first its contact function and connecting an above-water and underwater portion of the island. Shift of emphasis from overland exploration of northern islands to the shelf one drives the necessity of SPNA by organizing sea reserves in surrounding area. So, 2005 representative of a Norwegian party suggested some environment-oriented, which were based on essential expansion of environment-oriented regime for 21-mile sea zone of Norwegian territory waters, which ring about Spitzbergen archipelago, for account of giving them status of blanket protection. Such measures had an intention to provide comfortable conditions of white bear population inhabitance. The same experiment was earlier realized on the territory of Russian nature reserves, on Wrangel Island in particular, when its status was developed for 12-mile sea zone of territorial waters around Wrangell and Herald Islands, and 1999 the status of exclusive zone was given to 24-mile sea water area around the whole reserve[2].

An important element which completes the politics of rational island-usage on the North is creation of special Research and Practical Centers, which supply collection and processing of different data about island territories. Regional universities, situated on the northern periphery in

[1] National park “Russian Arctic”. URL: http://www.rus-arc.ru (accessed 13.06.2014).
[2] Official web-site of State natural reserve “Wrangell Island”. URL: http://www. ostrov wrangelya.org/ (accessed 04.09.2013).

comparison with universities in state centers are able to affect better on regional economy. As an example for such a research centre we can name universities of Spitsbergen archipelago, Prince Eduard Island (Canada) and summer university of Solovetsky Islands.

As a positive trend we can specify global scientific projects, which are realized on islands. In particular, on Spitsbergen archipelago a project of creation of World Bank of seeds is being realized, which is situated at the depth of 120 meters and at the height of 130 meters above sea. Spitsbergen was chosen for such a project because of its permafrost and low tectonic activity in the region of archipelago.

It is also important to pay attention on manufacturing industry in maritime belt, which cross-border influence can badly affect ecological situation of island territories.

Cross-border relations in island territories' reclamation

Earlier defined ecological problems as solved, as usual, during "island-continent" relations. While the duplication of some ecological challenges define the opportunity of decision procedure's development as part of multilevel international cooperation of such territories. A specialty of such a course will become cooperation based on reference to territories with particular geographical characteristic. The main goal of such coordination is considered to be development of a common strategy of activities in relation to islands. So, on the regional level it is important to develop common concepts and mechanisms of economic, social and ecological aspects of politics in the problem of achievement of sustainable development. For achievement of sustainable development it is important to provide mutually beneficial balance of international and national ecological priorities.

Such directions of common ecological politics of northern countries concerning islands as decision of utilization problems, landscape degradation, development of common landscape politics, innovation usage in the sphere of water supply, development of conditions for ecological tourism development, creation of a net of Arctic Island reserves and activation of negotiation for demilitarization of northern islands can be prospective. Implementation of special landscape politics on island territories is considered to be important.

To avoid duplication and to reach maximal optimization of projects of economic management on Arctic island territories it is important that this support will be coordinated through state regional government. On this evidence it is important to create regional working groups and to provide this coordination and also to collect all the important information about these territories. Interdepartmental coordination approach can be created on the level or include working group of

specialists who answer for concrete fields. The greatest opportunities for creation of international cooperation under island municipals have autonomous units of Northern Europe countries (Greenland, Farer Islands and Aland Islands), which use the elements of status of international rights' subjects, taking part in work of international organizations, conferences and so on. Initiative of these island regions can actualize integration in cross-border cooperation of other countries' islands.

Also when development of fundamental international contract about Arctic by arctic and another countries is it viable to include a special part in it, which will regulate law and common measures for islands' and other island territories' development. Among laws, consisting it, it is worth-while emphasizing following:

a) About countries' joining efforts in adaptation of northern countries for climate change;
b) About predominance of mostly natural-safe and scientific presence on northern countries;
c) About reduction of all countries armed forces' presence on northern islands with future perspectives of their demilitarization;
d) About creation of cross-border net of reserved territories and securing of system integrality of island SPNA of the region. But when on continents such roles are given for ecological corridors, here the connection of SPNA can be provided by sea current and animals' way [4, p. 31].

Conclusion

So, realization of rational politics of economic management in northern islands, based on rethinking of methods and approaches according to the principles of sustainable development is considered to be a necessary substantiation of state presence on these territories. As complex of arctic island territories amounts to cross-border space, firstly from the point of view of ecological parameters it is homogenous. Supply of such politics' realization is possible in connection with country's region's practice on management of Arctic Islands.

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ON THE QUESTION OF PUBLIC POLICY IN THE FIELD OF LANGUAGE PRESERVATION OF THE INDIGENOUS PEOPLES OF THE NORTH

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Abstract. Indigenous languages of Krasnoyarsk region, which are at risk of extinction to the maximum extent, are identified. Conclusion on the need to adopt a series of legal documents for the preservation of the languages of indigenous peoples of the North, Siberia and the Far East is justified.

Keywords: *Northern and Arctic territories, smaller indigenous peoples of the North, state cultural policy, language policy, Krasnoyarsk Region, Canada.*

Introduction

According to field studies, expert interviews, focus-groups, Russian and foreign research literature's analysis, we can draw a conclusion that it is important to take a number of legal documents for saving languages of smaller indigenous peoples of the North, Siberia and Far east. A differentiated approach let to find out languages of Krasnoyarsk Krai indigenous peoples, which run to the risk of full disappearance at most. As a recommendation for executive government bodies of the constituent entities of the Russian Federation it is suggested to use practice of State language politics of Canada.

Problems of language saving of SINP

A modern practice shows that processes of global transformations put to a question saving of cultural heritage of smaller indigenous peoples, who live in northern and arctic territories of the Russian Federation. Today these territories experience the second industrialization, which is considered to be the most important promotion of strategic safety of our country both economic and moral [1; 2; 3; 4; 5].

Today smaller indigenous peoples of the North (SINP) need goal-directed and disposed state politics oriented on safety and translation its unique linguistic culture, its mother tongues. A current and severe problem is gradual decrease and disappearance of social-cultural vitality of SINP mother tongues. Factors, which today actively influence the vitality of languages of smaller indigenous peoples of the North, are following:

1. Number of representatives of ethnocultural group and number of people, who speak native language of this ethnocultural group.
2. Grouping of language speakers into age divisions.
3. Ethnocultural character of martial relations.
4. Practices of acculturation and socialization.
5. Fields of local inhabitance of that ethnocultural group.
6. Intercultural linguistic communications.
7. Types of social communications characteristic for this ethnic group.
8. Ethnocultural identity and self-identity.
9. Educational practices at schools.
10. State politics in the field of native languages of one or another ethnocultural group [6, pp. 68-70].

State politics in the field of safety of ethnocultural groups smaller indigenous peoples' in the North native languages can both destroy or revive them. History of languages knows both results. Nowadays UNESCO is ruled by a specially created classification of languages which are endangered. It is common to mark following categories: 1) «unstable» languages, for which it is characteristic that more children speak it, but language itself is used in particular living environment of the ethnos; 2) «endangered languages», where children of this ethnic group stopped studying language as native; 3) «seriously endangered languages» (they are used mostly by the older generation as native); 4) languages which experience the critical state (only seniors speak them); 5) languages which will die soon. At that right of native language usage is formulated by the world society as a main person's right, irrespective whether its usage expresses belonging to social minority or to dominated social group. But the realization of this right sometimes isn't supported by the state politics. So, I.G. Ilishev writes, that "states react rather badly to the perspective of this principle's realization in life, moreover, when it is referred to provision of independence to people" [7]. That's why the right to choose language for social communications is realized in global world with great difficulty.

In such a way, the first principle of state politics in the field of saving of smaller indigenous peoples' of the North languages — is to give an undertaking to provide positive state politics in the field of native languages of these ethnocultural groups' representatives. But this principle is impossible to provide without the second one of successful state politics — presence of high value attitude of that ethnocultural group's representatives about their ethnic belonging, thus presence of processes of positive ethnic identification and self-identification [8]. Safety and further prosperity of native languages of SINP of the Russian Federation is directly connected with the fact, whether lan-

guage proficiency and its usage by people and their children for particular representatives is considered to be of absolute social, cultural and personal value. It is also important to notice that in the situation of global transformations, which is connected with the second industrialization of northern and arctic territories in the Russian Federation, cultural identity and self-identity of smaller indigenous peoples of the Russian north is destroying fast [9]. Their languages suffer from active ethnocultural corrosion.

Field studies of Krasnoyarsk Krai smaller indigoes peoples

In Siberia Federal University field studies of Krasnoyarsk Krai smaller indigoes peoples are provided since 2010 annually. These peoples compactly inhabit northern and equivalent to northern territories [10]. Krasnoyarsk Krai includes Turuchanski region, North-Yenisei region, Evenkian municipal area, Taimir Dolgano-Nenets municipal area. During 2010-2013 with the help of scientists, aspirants and students of the Siberian Federal University field studies of Krasnoyarsk Krai smaller indigoes peoples took place [11]. These peoples include ethnocultural groups of the Evenki, the Nenets, the Dolgans, the Chulimzi, the Nganasan, the Selcups, the Kets and the Enets.

Pointed out ethnocultural groups have a great population according to data of national Russian census of 2010 and they consist of 16 266 people. Certain ethnocultural Krasnoyarsk Krai smaller indigoes peoples have following population: the Dolgans – 5 810 people, the Evenki — 4372 people, the Nenets — 3633 people, the Chulimzi — 145 people the Nganasan — 807 people, the Selcups — 281 people, the Kets — 957 people and the Enets — 221people. In such a way, according to the criteria, announced before — the number of the ethnic group representatives — native languages of these ethnocultural groups to the languages, as minimum, which are in serious danger, and as maximum, to disappearing languages. For all the eight ethnocultural groups, representatives of Krasnoyarsk Krai smaller indigoes peoples it is necessary to take measures of task-oriented state politics in the field of saving of native languages, when to lay down an aim to save its unique culture.

Demographical investigations of Krasnoyarsk Krai smaller indigoes peoples' data by professor V.P. Krivonogov gives evidence of exceptionally dangerous language situation in the sphere of Krasnoyarsk Krai smaller indigoes peoples [10, pp. 400-485]. As an example let's take criteria, connected with whether mother tongue is used by children of Krasnoyarsk Krai smaller indigoes peoples. The Dolgan children (before 18 years old) — 32,1% know and speak the Dolgan language; The Kets children — 1,7% know and speak the Kets language; the Chulimts children (before 18) absolutely don't know and don't speak the Chulimts language; the Nenets children — 54,1% know and speak their native language; the Nganasan children — 47,6% know and speak their native lan-

guage; 1,7% of Enets children know and speak native language and 51,1% of Evenk children know and speak their mother tongue. Data about Selkup children V.P. Krivinogov doesn't give. Thus during field studies, taken by scientists and students of the Siberian Federal University 2010 in the village Farkovo of the Turuchanski region, where live the Selkups of Krasnoyarsk Krai, it was founded that situation with native language knowledge by Selkups children is awfully difficult [3; 10; 11].

In such a way we can suggest that languages of the Kets, the Nganasan, the Chulimts of Krasnoyarsk area and the Selkups are on the way of disappearing. However in all the territorial entities of the RF, which constitute in Krasnoyarsk Krai, there are no regional regulatory acts connected with definition of state politics principles in relation to both unique cultural heritages of these people in common or to attitude towards their native languages.

Canadian practice of aborigines' language preservation

Because of it we can compare our situation with Canadian, where, according to the Constitution of the country, indigoes peoples are divided into 3 groups: the Amerindians (who used to be called "Indians"), bastards (descendants of the Brits and the French, who married aborigines in the period of Canadian lands' reclamation) and the Escimo-Innu [12]. By that there are 86 endangered languages of indigoes peoples, including 9 "dead languages". According to the data of V.A.Kozemyakina, only 3 languages of Canadian indigoes peoples have an opportunity to stay alive and actively function in these peoples' culture. These are languages of the Iuits, Cree and Anishnaabe [12].

Regulatory acts of the Canadian state according to the UNESCO documents guarantee indigoes people the right to use their native languages. Canada has strongly pronounced principles of state cultural politics in the sphere of save and development of aborigines' languages. Indigoes peoples' languages must become languages of infamilial and interfamilial communications. These languages must be used in social incommunal communications. Studying of native languages must become the base education practice in schools. Borders of language usage of Canadian aborigines must always develop by the way of including of new ways of social communication in the sphere of these languages. Constitution of Canada and following enactments must support and provide functioning of Canada indigoes peoples' languages with the help of law mechanisms. According to the data of V.A. Kozemyakina, principle of active state politics in Canada is accompanied by presence of absolute value of native language usage [12].

Canada indigoes peoples have a brightly positive motivation to the corresponding identity, which heart is native language usage.

Conclusion

There is a number of subjects in the Russian Federation, for example, the Republic of Sakha (Yakutia), the Zabaikalye Territory and others also have rather developed regional law, connected with providing of the right of Northern, Siberian and Far Eastern indigoes peoples to study native language and its saving as an alive way of social communications. It appears that for realization of the second part of Sustainable development concept of Northern, Siberian and Far Eastern indigoes peoples № 132—p. founded by RF government regulation on the 4th of February 2009, all subjects of the RF, on which territory live these ethnocultural groups, must provide, as minimum, the second principle of the state language politics — to adopt regional normative acts, thus including laws, which regulate saving of unique cultural heritage of Northern, Siberian and Far Eastern indigoes peoples, state law guarantee for these ethnocultural groups to use their native languages in social communications. The first principle can rest upon already existent practice of those Russian regions, where such regulation documents already appeared.

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MODERN SITUATION IN THE ARCTIC IN THE CONTEXT OF GLOBAL TRENDS

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Abstract. Analyzes the modern situation in the Arctic in the context of geopolitical trends of the XXI century, the changes in International Relations after the return of the Crimea to Russia, the growing influence of China

Keywords: *Arctic, Russia, China, geopolitics, trends, challenges, U.S. intelligence report (2012), Crimea*

Introduction

This article sets a goal and solves problems of showing multipolarity of a changing world and other megatrends, using materials of report of the USA National Intelligence Council «Global Trends 2030: Alternative Worlds» (December 2012), and also changing of international relationship after back of Crimea as part of Russia at a time when the influence of China grows and NATO countries returns usage of instruments of Cold War, and also influence of these trends on the modern situation in Arctic. Commonly scientific methods of analysis and synthesis, web-analysis, historical, geopolitical and interdisciplinary methods are used.

Megatrends as being rather sustainable, non-current and massive tendencies are defined by those real global processes, which happen today in a changeable world or can seriously influence the future correlation of forces in the future, including Arctic region. Each new challenge, being inside or outside, according to A. Toinby asks for adequate answers, but their quality is always different. That's why the really happened in the modern world processes are not always format in a variety of strategically important trends for a long-term perspective. Nowadays an influence of civilization determinants is increased: cultural, ethnical mentality, belonging to history-cultural areas [1, I.F.Kefeli, pp.11-13], what appeared rather convexly and during the crisis process чin Ukraine.

A changing world

When characterizing the modern world as continuously changing world, in the most common appearance it is dominated from the beginning of the 21st century by 2 determined processes: a) permanent changes, usually of a crisis character, which lead to building-up of a potential of conflicts and instability; c) long period for transition to multi-centricity and multipolarity. These two

processes of a global scale in more or less expressed way are transformed into concrete trends in midterm.

Constant changes nowadays happen practically in all the spheres of human lives: geopolitical, geoeconomic, geocultural, social-demographical and ethnic. Moreover, a movement of community development continuous to accelerate and intensity of historically important events increases [2, p.5]. In the 21st century content and methods of government of a state, business, society and people stay unchangeable. Management of changes itself became a reality of presence and development of organizations of all types and all forms of incorporation, an important issue of modernization in a changing world, including Arctic region.

In conditions of ongoing globalization the tendency of permanent changes is correlated with increasing potential of instability. Crisis processes, business struggle in economic and financial sphere are escalated, a chaos, firstly controlled appears. Presented close connections of all countries' economics and at the same moment a keen states', transnational corporations' (TNC) and financial oligarchy's competition for market again demonstrated world financial crisis, when negative processes in one country (the USA) as a burning fire from the year 2008 up to nowadays at once influenced practically the whole world. A great crisis passed a number of time circles, grasping new countries and peoples and influencing the level and quality of life of hundreds of millions people through the whole world nowadays and in the future. Problems with money, back of credits, decline of goods and services production volume led to mass dismissal, growth of unemployment, especially among youth, what demonstrably appeared in many countries of the European Union (Greece, Cyprus, Spain, Portugal, Bulgaria and others).

Further development of the world economics will be much determined by the balance between formed tendency of the world economics incremental globalization and the trend of regionalization as reaction on escalation of the tension between world strength centers and concentration of disproportions in the world trading and financial system. Crisis which passes on the principle of globalization "we all are in the same boat", simultaneously increase the processes of protectionism, aiming for autarchy and surviving of each country one by one. A global society gradually flakes into autonomous parts, which usually doesn't coincide with administrative-state borders. Different socio-cultural values, variety of regional confessions, staying of centuries-long traditions of peoples' and states' distrust to each other; psychology and morality today more divide than unite people by all the seemed rather strong tendency of common technological, mass culture, formation of postindustrial civilization and global society of autonomous communities; standardization of all the parts of human lives and organizations. The dynamics of regionalization processes

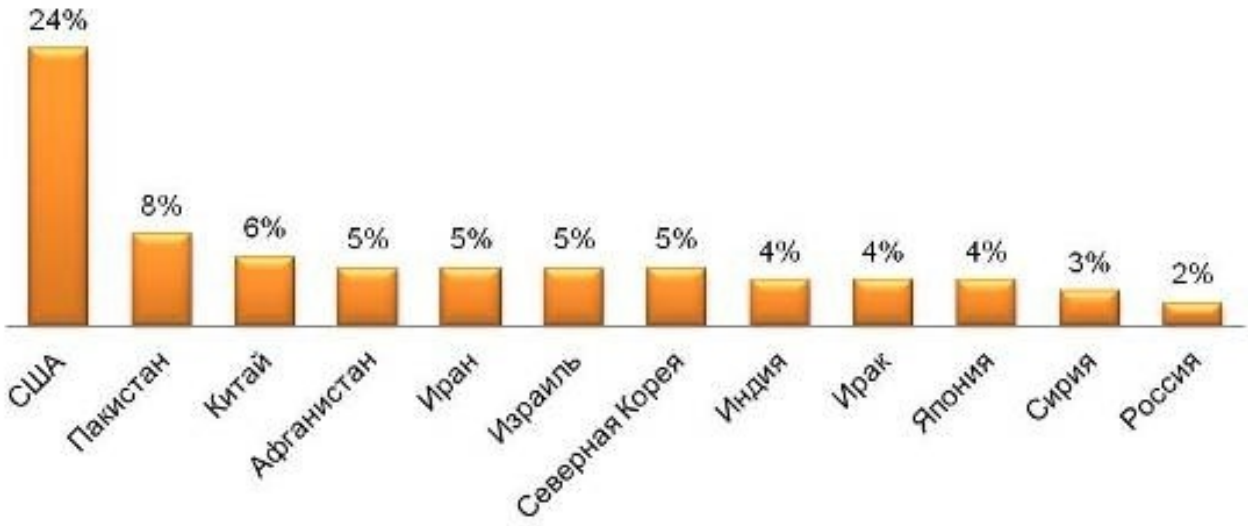
is rather complex and ambiguous; today it is very difficult to forecast how sustainable and long-going this tendency will be.

Even more alarming indicator of permanent instability become regional conflicts, which decay all around the world. From practically the beginning of the 21st century daily and monthly there don't finish actions using all the instruments of soft and hard power in the global society. Informational psychological wars and power actions of different types, where Russia is forced into, don't stop even for a minute. 2008 our country, when accomplishing their treaty obligations, had to answer by usage of war power on Georgia direct aggression against the peoples of South Ossetia and Abkhazia. 2014 Russia again found to be before difficult choice. A stroke of state in Ukraine demonstrated a modern model of two-ply so to say "peaceful" popular revolution on maidan in Kiev, which include in the meantime both peaceful and power technologies, sponsored by the USA and in fact led to cilvil war. Answering this challenge and real aggression to the Russian population, Russia helped the Crimea Republic and Sevastopol, who on the 18th of March 2014 entered the Russian Federation as its subjects. These events became not only the symbol, cruital moment in the newest history of Russia, but also the beginning of a new era of international relations changing, including situation in Arctic.

By that fact in society there is a bright and clear understanding, that the main source of instability in the modern world not Russia is considered to be, who as a matter of fact just answers from time to time appeared challenges. The source of a global instability after the USSR fall at any way became the USA with their mission of a global policeman, its exclusiveness, double standards and power promotion of west democracy in other countries. *At first* we must name here war interventions and NATO countries in Yugoslavia (1999), Iraq (2003-2011), Afghanistan (2001-2014), war operations of NATO forces during civil war in Libya (2011). A bloody war in Syria (2012-2014) is continuing not without the USA, Turkey, Franca and other NATO countries. These "hot spots" of the modernity molder endless for two decades and their end is not seen. *Secondly*, the USA purposefully and systematically undermine the situation in ex-Soviet space, while using the mechanism of the so-called "colored revolutions": "rose revolution" in Georgia (2003), orange revolution in Ukraine (2004), "tulip revolution" and disorders in Kirghizia (2005, 2010), mass disorders in Belorussia (2006), "snowdrop revolution" in Armenian (2008), "tile revolution" in Moldavia; "Russian winter" in Russia (2011-2012), when political meetings of the inside opposition with the help of foreigners on Bolotnaya square and Sakharov prospect took place; euromaidan 2013-2014 in Kiev. *Thirdly,* a wave of demonstrations and military takeovers, mass protests, the so-called "Arabian spring" took place in Middle East in Tunis (2010-2011), Alger (2010-2011), Egypt (2011-2013), Yemen (2011-2012), Bah-

rain (2011), Oman (2011), Jordan (2011), Morocco (2011) and other countries of the Arabian world by latent support of not only USA, but conservative Islamic regimes. The situation in Iraq again exacerbates in June 2014.

The former USA president Jimmy Carter in his interview to the journal Salon when answering the question how another part of the world takes us (here it goes on USA), suggested that practically the whole world takes America as the warmonger №1[1]. Gallup International investigation called "Global barometer of hope and despair", which took place in November-December 2013, really showed that practically one-fourth (24%) of earth citizens considered USA to be the most threatening. According to the world estimates appeared to be on the 12th place, it got 2%. It is important to notice that 2014 the public opinion after back of the Crimea to Russia, state coup and civil war in the Ukraine could be changed under the influence of psychological reaction and information manipulation, its distortion.



Pic. 1. Gallup International investigation: which country is considered to be the most threatened for the whole world 2014. Available at: http://ruskline.ru/opp/2014/3/21/issledovanie_gallup_international_kakaya_ strana_ predstavlyaet_nai-bolshuyu _ugrozu_dlya_vsego_mira_v_2014_godu/ (accessed 24.04.2014).

As a conclusion we can say that global and regional instability, being understood as sustainable incremental development of most of states, in the beginning of the 21st century practically doesn't exist. Transition from monopoly hegemony of the USA to the multipolar world leads to incremental formation of other power centers such as China, BRICS, Eurasian economic unit, Economic belt of silk way, appearance of another political actors on the world arena. But for how long

[1] David Daley. America as the No.1 warmonger": President Jimmy Carter talks to Salon about race, cable news, "slut-shaming" and more. Apr 10, 2014. URL: https://www.salon.com/2014/04/10/america_as_the_no_1_warmon-ger_ president_jimmy_carter_talks_to_salon_about_race_cable_news_slut_shaming_and_more/ (accessed 24. 04.2014).

will this process of transition to multipolarity continue and what else will states who make away with constant USA dictate meet with? Nowadays it is impossible to answer these and other similar questions. And here appreciation of global trends by the USA is of interest.

China up, Russia down

In report of the National Intelligence Council[2] «Global Trends 2030: Alternative Worlds» it is noted that the USA foresee the trends of vectors over the last years right: «China up, Russia down». Rates of economic growth in Russia have really slowed down, and China participation, in spite of economic growth slowing down, will constitute for about one-third of the world economics 2025.

3 megatrends are emphasized in the analyzed report:

1. ***Individual empowerment***. Growth of individual opportunities as a fact of poverty reduce, middle class increase, widening of the educational system, usage of new communication and production technologies, achievements in medicine.
2. ***Diffusion of Power.*** Diffusion of power supposes that there will be no hegemony-empire, succession to nets and coalitions in multipolar world takes place. China will be the greatest world economy, more than USA. European countries, Japan and Russia, will probably continue their slow relative reduction. A various spectrum of war instruments, especially opportunities of high-accuracy strike, cyber-instruments and bioterrorism for private people and groups of people, who will have an opportunity to make large-scale violence and destroy, what was earlier a monopoly of the state, will become accessible.
3. ***Demographic Patterns.*** a) Unprecedented and prevalent age hardening; b) reducing of young societies and states; c) increasing of migrations, which becomes more globalized, both rich and developing countries suffer from manpower tightness; d) increasing urbanization, 60% of the world population will live in urbanized districts.
4. ***Food, Water, Energy Nexus.*** Because of world population, structure of consumption and middle class increase, there takes place an increase of production and growth in demand of products on 35% to the year 2030, water on 40% and energy resources. Practically one half of the world population will live in districts, where will be acute shortage of drinking water. Many countries probably will not have enough money to evade lack of products and water without massive help from outside. There will be enough shale gas in the USA to satisfy the inside demands and to create a potential of the world export for decades.

To the number of the key critical game-changers, which pathways are less pointed, according to the USA intelligence, belong:

1. ***Crisis-Prone Global economy***. Crisis-prone global economy leads to global instability and increasing disproportions between players with different economic interests as a result of collapse? *Or increasing of multipolarity will lead to increase of sustainability in the focus of the world econom-*

[2] Global Trends 2030: Alternative Worlds. A publication of the National Intelligence Council. December 2012. NIC 2012 -001. URL: http://www.dni.gov/index.php/about/organization/global-trends-2030; http://ru.scribd.com/doc/ 115962 -650/Global-Trends-2030-Alternative-Worlds (accessed 22.06.2014).

ic order? In the countries with forming infrastructure, habitation, consumer goods, new factories and equipment demand market global investments will increase to the level, unprecedented during last 4 decades.

2. ***Governance Gap.*** Governance gap because of increasing of a number of state and non-state players and also subnational objects complicates the process of decision-making. In spite of growing multipolarity a regionalism is also growing. Processes of democratization are accompanied by instability, for about 50 countries are between autocracy and democracy. Social nets, on one hand, let the population unite and challenge the power (Middle East), on the other hand, they give autocratic and democratic governments an unprecedented opportunity to control their citizens.
3. ***Potential for Increased conflict.*** Potential for increased conflict: historical tendencies witness reduction of great conflicts, but fast changes of power lead to potential concentration for state and interstate conflicts, especially with the increase of differences over the issues of deficit of natural resources (water, earth). A modern Islamist phase of terrorism could finish by the year 2030, but the terrorism itself will not likely die.
4. ***Wider scope of regional Instability.*** Wider scope of regional instability, especially on the Middle East and in the South Asia influence the global security. Appearance of moderate, democratic governments or breakthrough of Israel-Palestine conflict settling will have absolutely positive consequences. For the nearest 15-20 years the South Asia will face a number of inside and outside convulsions. Different scenarios of these conflicts are possible.
5. ***Impact of new Technologies.*** Influence of new technologies on an economical growth, decisions of problems, called by population increase, fast urbanization and climate change. Four groups will form global economical, social and war actions: а) IT, social media, cybersafety; б) new technologies of production and automation, robotechnics; в) recourse technologies for supplying with unexpendable resources: food, water, energy. MMC, methods of irrigation are used, increase of oil-and-gas exploitation takes place; г) new technologies of health service.
6. ***Role of the United States.*** USA will probably stay “first among equal”, single-polarity finishes. Questions of work with new partners, modernization of international system takes place. In the best foreseen way USA and China collaborate in a number of questions, that will lead to more wide global collaboration. In the worst way a risk of international conflicts will increase. Dollar downing as the world reserve currency strongly explodes the political influence of Washington [4].

World of 2030 will radically change. No country, whether USA, China or any other country couldn’t be a hegemony, - that is written in the research. Four scenarios up to the year 2030 are introduced. They are named nominally “Skidding motors”, “Collaboration”, “Gene from the bottle” and “World of non-state actors”. But a serious analytics according to Russia in this research was missing. Arctic was shortly mentioned in the way of climate and temperature change, reduction of sea ice and increase of sea level because of deglaciation in Greenland.

Arctic trends in Russia

Meanwhile it is important for us to understand those real challenges, which arrear before Russia in the Arctic and will define the tendencies of future development. As for climate, academician of RAS G.G. Matyshov suggests that high noon of warming in Arctic is over and it begins a cy-

clic period of cooling (29.05.2014, Murmansk). According to the carried out analysis to the main arctic megatrends, on my opinion, we can refer 3: 1) Ecological interdependence, arctic solidarity. 2) Great redistribution of Arctic: struggle for lands, communications and arctic resources. 3) Formation of arctic multipolarity model in a modern changing world, increasing activity in Arctic.

Ecologic interdependence (EID) is defined by myself as a quality of person-nature relations for the purpose of preservation of the environment and also arctic solidarity with people's actions as an opportunity to carry on a dialogue and to make arrangements about introduction of limitations, standards, people's rules rights, business and states in Arctic. By all the incongruity of opinions about the future of the Arctic region, the ecological interdependency in a wide way, is still considered to be the paradigm of continuous discussions, scientific forecasts and concretely is developed in:

a) Human factor, which is in much influenced by people's charge, quality of men's capital, social cohesion of population;
b) Professional and competent management of the Arctic zone of the RF;
c) Presence of rules and regulations for decision of appeared problems of the Arctic environmental preservation;
d) Necessity of balances between economy and ecology;
e) Time to market modern environmental-saving technologies, innovations in the practice of actions, in presence of investments for it, as it leads to increase of resources' prime costs and of expenditure;
f) Presence of infrastructure for provision of needful freedom level of population's movement, finances, goods and services, information and also of motivated already existed liberalization in trans-border mobility in Arctic of tourists, travelers, indigoes peoples (visas, quotas and customs and so on).

In scientific world, internet, mass media a question of whether it is current to begin an active operational activity on exploitation in the Arctic is discussed. Many scientists and ecologists are in favor of conservation of arctic natural values and of saving of Arctic biological variety in untouched softness and in a state of nature for future generations. Greenpeace by all possible means tries to create a world preserve in the Arctic and to forbid oil-and-gas exploitation, fishing in arctic waters. They motivate it by the fact that no company knows how to liquidate oil spill effectively. A corresponding member of RAS F.N.Udakhin (1934-2011) in due time alerted «revenge of Arctic mineral resources». By transfer of hydrocarbons from the earth there happens rearrangement of stress conditions in crust of earth, which can cause earthquakes, break in the pipe-line, pollution of Arctic soft environment and other negative circumstances being more dangerous and great than the catastrophe in a Mexican Bay.

It is also important to pay attention to scientific-proved summaries that Russia, having great hydrocarbon reservoirs on the earth, can put on hold its exploitation in Arctic seas, when minimizing by that fact ecological risks. Minister of natural resources and ecology of the RF Sergey Donskoy on the 15th of January 2013 in Novy Urengoy on the meeting "Of perspectives of Russian continental shelf resources development" under the heading of Russian Prime Minister D. Medvedev suggested that without increasing of geological knowledge of Russian continental shelf perspectives of its exploitation shift to 2030[3]. And it's really that according to the published 2013 in MNR of the RF data of exploited and proved Russian oil-and-gas reserves, *proportion of Arctic shelf deposits consists only 2%.* Moreover, solid reserves of oil exploitation on the earth are not exhausted yet: usage of new technologies of effectiveness increase of oil-and-gas exploitation; increase of level of casing-head gas rational usage (shortage of its burning volumes); development and wide usage of new technologies of light tight and low-grade oil exploitation and others [3]. Assistant director of RAS oil and gas problems, RAS corresponding member V.I. Boyagoyavlensky makes an important conclusion that "Russia has great resources and reserves of hydrocarbon in different regions of the land, that's why it can come along to the Arctic sea reserves exploitation at a saunter, choosing the best and the most secure innovational technologies, when saving the strategic reserve of hydrocarbon and soft nature of the Arctic for future generations" [3, p.15]. Professor of National mineral university "Gorny" (SpB) A.E. Cherepovizin also considers the current state of geological development doesn't let to overview oil-and-gas sea reserves to be a real reserve of hydrocarbon [4, pp.191-192]. When acting on the conference in Murmansk "Russian national interests and economy of sea communications in Arctic" which took place 29-30th May used a slide called "Greatest Gazprom projects — what shelf for when there are projects on the ground?"

More facts appear that ESI problem becomes a real trend for many years not only in science, politics of Arctic states, but also in a real activity of greatest energy companies of the USA, Norway, Great Britain and Russia who produce oil and gas in high north latitudes or those who plans to do it. There is nobody who wants to give up usage of arctic hydrocarbon nowadays and in the future in a whole way, but ecology, necessity of Arctic environment safety dictate its limitation.

Resource challenges in the Arctic ask not only for understanding of danger and risk for the environment, but also for a strong compliance of a balance between economy and ecology according to usage of innovational, more safety technologies in the nearest future. A quality break-

[3] URL: http://www.mnr.gov.ru/news/detail.php?ID=130045&print=Y (accessed 05.07.2014).

through in Arctic, which will cut ecological risks, can become *underwater complexes of hydrocarbon exploitation*. Underwater oil-and-gas exploitation spread from the 60-s of the last century. In the practice of sea activities up to modern times there is a definite background, new projects in both Russia and abroad, based on minimization of ecological challenges, are evaluated.

For the first time in the history of native gas production an underwater producing complex of "Gazprom" appeared for development of continental shelf exploitation, which from October 2013 works on Kirinskoye field in the Sea of Okhotsk [4]. The complex lets to excavate hydrocarbons in horrible weather conditions, even under ice without building of overwater constructions, and its equipment is tolerant to earthquakes up to 9 on Richter scale. The produced gas is collected in manifold, situated 90 meters depth, brought through the sea product pipeline to the shore technological complex and then through the 139-kilometer gas-transmission pipeline to the head compressor station of gas-transport system "Sakhalin – Khabarovsk – Vladivostok".

O.Ya.Timofeev thinks that «*probably in our Arctic all technologies will be connected with underwater going of objects*, because there are great problems with flat ice load»[5]. Since June 2013 Fund of Perspective Investigations (FPI), Rubin Central Design Bureau for Marine Engineering, OAO "Gazprom" and Far-Eastern Division of RAS lead down a working out of avant-project *"Technologies of underwater (under ice) field development of natural resources of the Arctic seas"* [5, D.O.Rogozin].

Based on usage of underwater technologies it is supposed to lead development of the Murmansk gas field in the Barents Sea. Underwater technologies of development and transportation of gas are used Ormen Lange project on a great gas continental shelf field in Norway. But in April 2014 this project was postponed for the purpose of concept for offshore compression based on new economic expenses estimate[6]. As restrictions in this and other projects appear expenses, economic factors in usage of newest technologies.

A Norwegian company Statoil is planning to bring into production *the first underwater fabric with full circle to the year 2020*. «Statoil Subsea Factory» will make possible a remote control over hydrocarbon transportation from every point on the shore. Arctic production fields of the future will conceptually present uninhabited multimoduled complexes with the full production cir-

[4] The first Russian underwater producing complex successfully tested on Kirinskoye field "Sakhalin-3". 23 октября 2013. URL: http://www.gazprom.ru/press/news/2013/october/article175040/ (accessed 08.05.2014).
[5] A vice-director of Krilovskoye SSC Oleg Timofeev: "Customer needs not only technical decisions, but also financial". 11-04-2014. URL: http://oko-planet.su/finances/financescrisis/238622-zamestitel-generalnogo-direktora-krylovskogo-gnc-oleg-timofeev-zakazchiku-nuzhny-ne-tolko-tehnicheskie-resheniya-no-i-finan-sovye.html (accessed 07.05.2014).
[6] Shell Delays Project to Boost Ormen Lange Gas Output on Costs. URL: http://www.bloomberg.com/news/2014-04-11/shell-delays-project-to-boost-ormen-lange-gas-output-on-costs.html (accessed 04.06.2014).

cle, the whole "underwater cities" with its transport, energy and connecting lines. Anyway, this problematic is rather current in the process from both from the point of view of saving of tender Arctic environment and of ecological (non-maleficence) and economic position (investments, expenses, modern technologies and human factor).

Human factor, which is connected with human capital (HC) formation in Arctic, with quality of new resources, is considered to be *the key element of ecological interdependence*. Typical forms of investment here appear to be education, advanced training, migration and job hunting, health and nutrition, relax, physical education and sport. A direct attitude to formation of HC have both trends, pointed in USA intelligence report (2012) and in UN report about climate changes and human solidarity in a disunited world (2007)[7]. In one or another way all the pointed problems have direct attitude to habitability in Arctic.

In solving of a problem of human capital formation on the North there are each other cancelled positions. This question provoke discussions because of different approaches to Arctic field exploration: a) by rotating scheme, gradually resettling the population living in high latitude to warmer regions; b) by the way of renewal and supporting on a high level of all existed in Russian Arctic urbanized infrastructure. The second approach demands for huge investments in development of all the social sphere, housing and public utilities, transport infrastructure of already existed base city population in high latitude: Murmansk, Arkhangelsk, Severodvinsk, Naryan-Mar, Amderma, Vorkuta, Salekhard, Norilsk, Dudinka, Dickson, Tiksi, Anadir and others. Virtual projects of creation of new "innovational cities", which will never be compensated, unlikely to have real perspectives. Creation of compact temporary settlements with usage of the most current and ecologically clear life support technologies for tourists, militaries, border guards, oilers, meteorologists, gas workers and other specialists who explore and control the Arctic fields is current. Rotating scheme is impossible to exclude in the whole, but to place the stake just on it would be improvidently. That's why *the modern rotating scheme and development of already existent settlements in the Russian Arctic* – the only right strategy in this question.

Decision of questions of socio-economic development, population size and quality of their lives, social cohesion and also determine of inside and outside borders of Russian Arctic settlements appear to be serious global challenge for Russia. Russian Arctic – is not a blank space, here live 2,5 mln. people, as in the other seven Arctic countries just 2,1 mln. people.

[7] Report on human development 2007/2008. Struggle with climate change: human solidarity in a disunited world. URL: http://un.by/f/file/HDR_20072008_Summary_Russian.pdf (accessed 08.05. 2014).

Important documents on socio-economic development of Russian Arctic were admitted by the President and Government of the Russian Federation in the end of April – beginning of May 2014:

a) On the 21st of April Government of the RF by their order № 366 ratify the state program of the Russian Federation "Socio-economical development of the Russian Federation Arctic zone up to the year 2020"[8].

b) On the 22nd of April 2014 under the chairmanship of the President of RF meeting of the RF Security Council on Arctic took place.

c) On the 2nd of May 2014 President of Russia V.V. Putin signed a decree №296 "About Russian Federation Arctic zone land territories".

An adopted state program (abbreviated – SP "AZRF – 2020") mostly synthesizes implementation program under the already realizing FIP and other state programs of the RF[9]. Acceleration of socio-economic development of the AZRF is supplied by the way of implementation of social development questions in the strategies of long term evolution of federal regions and subjects of the RF, sectoral strategies and programs. But the *"full funding of the program"* will begin only from 2017[10]. This means that this program initially doesn't work at full breath and destined for bureaucratic games around it.

By decree of a President of Russia № 296 from the 2nd of May 2014 "About land territories of the Russian Federation Arctic zones" AZRF consists of eight subjects of the RF: 1) Murmansk region; 2) seven municipal regions of the Arkhangelsk region; 3) Nenets Autonomous Area; 4) urban district "Vorkuta" of Komi Republic; 5) Yamalo-Nenets Autonomous Area; 6) urban district Norilsk, Taimir Dolgano-Nenets municipal district and Turukhansky district of Krasnoyarsk Krai; 7) five nomad camps (districts) of Saha Republic (Yakutia); 8) Chukotski Autonomous Area; 9) and also lands and islands situated in the Arctic Ocean, pointed in CEC USSR Presidium enactment from the 15th of April 1926 and other acts of the USSR[11]. Unfortunately, in the May decree of a president of Russia is goes on land territories, though AZRF includes also sea of the AO, including White Sea. In such a way undervaluation of sea activity, determination of AZRF borders including special eco-

[8] State program of the Russian Federation "Socio-economic development of the Russian Federation Arctic zone on the period up to the year 2020" / RF Government decree № 366 from the 21st of April 2014 г. URL: http://www.consultant.ru/document/cons_doc_LAW_162195/ (accessed 10.05.2014).

[9] Analysis of the project SP "AZRF – 2020" (04.11.2013) is done by me in the article "Status, structure and population of Russian Arctic", published in "Arctic and North" № 15. URL: http://narfu.ru/upload/iblock/f41/04. pdf (accessed 02.07.2014).

[10] Meeting of Russian Federation Security Council on the 22nd of April 2014 on the question of realization of state politics in Arctic. URL: http://президент.рф/новости/20845 (accessed 24.04.2014).

[11] Decree of the Russian President "About land territories of the Russian Federation Arctic zones". 2nd of May 2014 № 296. URL: http://президент.рф/документы/20895 (accessed 04.05.2014).

nomic zone (SEZ) and Northern way water area takes place, what has a great geopolitical meaning. Adoption of a law about AZRF in a State Duma of the RF is frozen; there is no public clarity when it will be passed. Bureaucratization of management and solving of Arctic problems just by laws from the up without proper discussion and accounting public opinion negatively influence the activity and liability of people, regions and the whole society itself. Nowadays there is more deficit of effective state management, than the real modernization of management of Russian Arctic, including Minarctic and sea politics of the Russian Federation.

In June 2014 questions concerning exploration of the Arctic were touched on meeting of the Commission on FEC development strategies and ecological safety (4th of June 2014 in Astrakhan); meeting on effective and safety exploration of the Arctic (5th of June 2014 in Saint-Petersburg); meeting on socio-economic development of the Arkhangelsk region (9th of June 2014 in Arkhangelsk), during which attention was concentrated on actual problems of *import substitution* in oil-and-gas platforms producing, liquefied-gas carriers, tankers and other marine techniques for work in the Arctic region.

The more appeared trend of accessible natural raw materials' deficit in the world escalates struggle for development of Arctic, Antarctic, World Ocean and space (Moon, Mars). It is clear that demands of increased population are impossible to provide inside the national borders. Answer on this challenge is not in decrease of population and their demands, but in systematic transformation of a global economy based on the newest technologies. Russian Arctic can anyway become that resource region, which will stabilize the situation in the world. By this way ESI becomes not only a long-term trend for modern and future generations, but also a common important imperative for business, arctic and other countries of the world, which use arctic resources.

For a megatrend, named by me, «***Great repartition of the Arctic***», is more than 100 years. The goal of such a continuous struggle from the beginning of the 20th century can be formulated as "war for lands, communication, arctic resources", and the dynamics of this process – as "Great repartition of the Arctic", which chronologically continuous for several centuries. Stages of this process and other conceptual questions were overviewed by me in 2 monographs (2010, 2013) and in a number of articles. That's why I'll not pay attention on it in this article.

I would just like to say that I was always wondered when particular Russian businessmen usually told that there was nothing to divide in Arctic now, that more than 95% of opened resources in Arctic are situated in special economic zones of arctic states. Really, after adoption of UN Law of the Sea Convention (1982) many countries of the world rather legitimately put their both territorial waters and 200-miles EEZ. But there are still doubts about whether how civilized

the continental shelf (ocean floor and its resources) beyond the EEZ for 350 sea miles will be divided. That's for Denmark, Canada and Russia so hardly struggle for, while making applications in the UN Committee on continental shelf and laying claim to the North Pole. Still rules of different bioresources exploitation in the so-called UN zone — circumpolar part of the Arctic Ocean (around the pole) — are not defined yet. Struggle for transport communications, Northern Way and North-Western Gate internationalization is not over. In other words, Arctic is considered to be the arena of proneness to conflict, whether mantras we listen, for a long time.

Moreover, USA hasn't still ratified even UNCLOS (1982), what gives a great opportunity of continuous latent menace. Arguments of opponents of the ratification in the USA are following: 1) practically 3⁄4 of earth lands will be given under control to international organizations; 2) it will limit the freedom of navigation, including limitations of war and intelligence activities; 3) decreasing of American companies' profit, who already explore the shelf; 4) Convention was adopted during the "Cold war" for countries of the third world and with support of the USSR with the redistribution of rights and resources; 5) ratification of the Convention will create a dangerous precedent, according to which, each resource which the national laws don't occupy, can be announced as a collective privacy or property of all the people in the world (Antarctic, space, internet); 6) USA national legislation, which has a priority over international, has never limited the length of the continental shelf, that's why ratification of the Convention is not profitable; 7) Corrections to the Convention, founded 1994, though took into account American demands, by themselves have an unidentified legal status. That can be interpreted as not being a part of the Convention [6].

In National Strategy for the Arctic Region (May 2013) national interests of the USA include freedom of overflight and navigation through the North-western Gate and Northern sea route, and it is also directly announced that USA pretensions over continental shelf in the Arctic region can be enlarged upon *600 miles* from the Northern shore of Alaska [12]. This is considered to be an example of the direct revision of the UN Law of the Sea Convention.

In the continuous Great repartition of the Arctic gradually are involved not only 8 arctic states, but also China, India, Japan, South Korea and other countries, who don't have direct outlet to the seas of the Arctic Ocean, but these states are interested in usage of mineral resources and transport communications in the Arctic. The main idea of many countries' strategies, but not only

[12] National Strategy for the Arctic Region. The White House. Washington. May 10, 2013. C.9. URL: http://www.whitehouse.gov/sites/default/files/docs/nat_arctic_strategy.pdf (accessed 03.06.2014).

for arctic “eight”, becomes “war for the resources of the future”, for oil and gas, supplying of their advantages in the Arctic.

Possible ways of geopolitical development of Arctic issue from, *firstly,* word enounced strategies of arctic states, focused on strengthening of stability and safety in arctic region, while watching it as a zone of peace, dialogue and communication as well as, *secondly*, multiple-vector war activities of the USA, NATO – main enemy of Russia in Arctic. Speaking on conferences and a number of articles of doctor of historical sciences and Colonel General L.G. Ivashov are devoted to the analysis of concrete aspects of such activities. In the article “Geopolitical perspectives of Arctic development” he directly tells that *a war tension of a global scale begins in the Arctic North* [7, c.17]. In mass media, scientific literature a concept of a decapitation strike (FGS – “fast global strike”) is analyzed with usage of high-destruction effect precision weapon (cruisers, jet-planned systems, remote-piloted vehicles and so on) and systems of untraditional technologies. Within the geopolitical operation of system-net approaches the concealed destabilization of six leading segments of the RF national development and defense potential: political, war, economic, social, infrastructural and informational takes place with the idea to provide “strategic collapse” of the system of state and war management of the RF in the active struggle period (2014-2015) and, when needful, to provide the stage of war time. To the strategic weapons of destruction based on new physical principles, the American military command enlists a patulous within the Russian borders system of 10 plasmatic complexes of geophysical weapons (USA, Canada, Norway, Iceland, Japan), which is made for initiating of seismic and ecological actions. By that a complex of problems is solved, including natural destroying phenomenon, breakdowns and catastrophes, interruption of control systems and others. “This weapon already works against Russia, set by enemies challenges of a peace time are successfully solving”, — notices L.G. Ivashov [7, p. 19].

A creeping latent militarization of the Arctic develops today in a permanent speedup for the real influence and supremacy in circumpolar world, a buildup of military forces here. Demonstration of a power is actively used — annual military manoeuvres and exercises, expedition of American and Russian A-subs to the North Pole, flight operations; creation of new military bases and modern mobile connections, multipurpose space systems in the USA, Norway, introducing of new weapons, modernization of marine fleets.

It is important to point that struggle for the Arctic nowadays — is not a traditional “hot war” with introducing of different types of weapons and people’s deaths. It is mostly usage of instruments of *a soft power* in all the possible life directions of the northern societies. An opportunity of the fact that Russian places of hydrocarbons’ exploitation could, for example, become the

objects of undetected influence for pressing out of Russia from the region on the ground of non-compliance of ecological standards [5]. As one of the instruments of a soft power in Arctic ethnic tension, spiritual, religious-political expansion is used. A dangerous menace of a state safety in the Arctic region possesses a cyber-terrorism, usage of other newest technologies for both aggression and for defense.

The first cracks in interruption of continuous relations in the Arctic

Pic. 2. Leona Aglukkaq. URL: http://beta.images.theglobeandmail.com/2d7/news/politics/article16544096.ece/ALTERNATES/w220/SKP507Commons+20131105.JPG

A wave effect of a crisis between Russia and Ukraine leads to formation of political fault line in Arctic Council. A council chair Leona Aglukkaq announced in April 2014, that Canada will not take part in meeting of working groups in Moscow because of quasi Russian illegal occupation of Ukraine and continuous provoke actions in Crimea and other places, but will continue to help the important work of Arctic Council[13]. Announce was rather antinomic (will — will not). But this step was rather expected according to the modern situation of Canadian sanctions with reference to a number of Russian diplomatists, business, and stop of all double-sided arrangements and not so logical because of importance of the discussed ecological problem. A Moscow meeting was planned as a business and evidently non-political arrangement, where questions of firedamp and channel black outburst, their influence on decreasing of capability of snow and ice to reflect sunlight must be discussed. The main topic of Canadian chairmanship in Arctic Council (2013-2015) Leona Aglukkaq not long ago named “Development of North for inhabitants good” with a particular focus on defendant resource development in Arctic, safety navigation in the Arctic waters and sustainable development of indigoes peoples of poleward areas. Real steps of Arctic Council chair speak for obvious priority of geopolitics over ecological collaboration.

Right before pointed meeting identical steps were taken by Norway, who in March 2014 delayed the planned visit of a Minister of environment Tine Sundtoft in Moscow. It was the first in over ten years meeting on the level of Ministers of Norwegian-Russian commission on environment, where problems of transborder pollution of Norway from the metallurgic fabric in village

[13] Ottawa upbraids Russian envoy, skips Arctic Council meeting over Ukraine. Apr. 15 2014. URL: http://www. theglobeandmail.com/news/politics/ottawa-upbraids-russian-envoy-will-skip-arctic-council-moscow-meeting-over-ukraine/article18032205/ (accessed 22.06.2014).

Nikel of the Murmansk Region, a planned widening of state natural reserve "Pasvik" and permanent conditions of ecological organization must be discussed.

USA, Canada and other arctic states stopped not only ecological, but also other forms of collaboration with Russia, including all planned joint military exercises, friendly visits in sea ports. Ministers of defense of 5 countries of the Northern Europe in Tromso (Norway) overviewed opportunities of enlargement of politico-military collaboration between countries of the Northern Europe[14], bringing back to life the so-called "mini-UN", useful, according to the words of ex-embassador of the USA in Norway Benson Whitney, to "keep an eye on polar bears and Russians" and also to answer the Arctic challenges[15]. Debates of entering of Sweden and Finland in the UN again activated. As an argument for is produced that they will be guarded according to the fifth paragraph of the North Atlantic treaty, when attack against one participant is considered to be the attack against all. But who is going to attack against Sweden, Norway, Finland, - is not understandable? Arctic phobias of the period of the Cold war are operated with the idea of increasing of defense spending in the budgets of their countries, as Sweden has already done, announcing of increasing of annual defense spending over the next 10 years [16].

A definition of *Arctic as the second forefront for Russia* was sounded in mass media. "Arctic cracks between opposition and cooperative endeavor, when staying the region of the hardest pressure, which *doesn't finish from the end of the Cold war*. This is moreover right because nobody in institutes of regional cooperation has full powers for solving problems of security and problems of prevention of conflicts. In the greatest of those, Arctic Council, it is forbidden to broach these themes" – so characterized the modern situation Romain Mielcarek [17].

Some famous politicians, when making comparisons with Crimea and terrifying themselves and others, are concerned with the possible same behavior in Arctic, showing their phobias as being a reality. A prime Minister of Iceland Sigmundur Gunnlaugsson, for example, considered Russian actions on Ukraine to make serious problems in collaboration for eight countries in the Arctic

[14] Thomas Nilsen. Crimea crisis influenced the perspectives of the northern military cooperation. 10th April 2014. URL: http://barentsobserver.com/ru/bezopasnost/2014/04/krymskiy-krizis-otrazilsya-na-perspektivah-sever-nogo-oboronnogo-sotrudnichestva (accessed 17.04.2014).

[15] To keep an eye on polar bears and Russians. URL: http://narfu.ru/aan/arctic_news/look_russia.pdf (accessed 22.06.2014).

[16] Sweden will increase defense spending because of situation in Unkraine. URL: http://itar-tass.com/mezhdunarodnaya-panorama/1143153 (accessed 24.04.2014).

[17] Romain Mielcarek. Arctic – the second front for Russia. 18.04.2014. URL: http://inosmi.ru/world/20140418/219663638.html (accessed 20.04.2014).

Council. Many parties in Arctic, resulted from the current developments, have serious disquietude and questions, whether it can be the sign of what will happen (something forthcoming)[18].

Threatened battlefield rhetoric in this setting are public speaking of Hillary Clinton famous for her aggressive statements according Arctic and Russophobia while she was a USA Secretary of State. The future possible candidate for USA president (2016), who condemned Russia for Crimea, took care of creation of a new Arctic front with Canada to stand against heightened aggression by Russia in the Arctic, — noticed a popular Canadian newspaper the Globe and Mail»[19]. Argumentation was that has the longest seashore in Arctic and renews military facilities in the region; regularly provides military airlifts over Canada and Alaska. Well, "no comments" speaking about the longest seashore in Arctic. Military facilities – is a usual routine activity specific for many countries. But we must take into account that nowadays Russia has to do in the Arctic not with peculiar countries (USA, Canada) but with the united front of all the countries-participants – parties of the NATO.

In a number of announcements nowadays Russia is openly considered to be the NATO opponent[20]. NATO General Secretary Anders vog Rasmussen in the public confirmed on the 5th of May 2014 that Russia became from the partner an opponent of the Alliance, because situation in Ukraine sparked more concern[21]. Rasmussen by that way called all the countries – NATO parties to increase military budgets. In many states — parties of the agreement, according to his words, military expenses for the latest few years have fined down 40%, and Russia during that period increased a military budget for 30%.

It is important to notice that Arctic management according to the active Arctic Council as a membership club of "Arctic eight", five of which are enlisted in the NATO, can become dangerous for both Russian State and for its national interests. Analogies are appropriate here. It is well-known, that by sanctions against Russia accepting in spring 2014, USA were encouraged not only by their NATO allies but also all the parties of G-7. But in G-20 Russia got the support of BRICS. It is evidently that for Russia more acceptable becomes the orientation to creation and functioning of

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[18] Sigmundur Gunnlaugsson. Crimea crisis could have ripple affect in Arctic, warns Iceland. Mar. 09 2014. URL: http://www.thestar.com/news/world/2014/03/09/crimea_crisis_could_have_ripple_affect_in_arctic_warns_iceland.html (accessed 19.04.2014).

[19] Hillary Clinton warns Montreal crowd of Russia's increased activity in Arctic. Mar.18 2014. URL: http://www. theglobeandmail.com/news/politics/clinton-warns-montreal-crowd-of-russias-increased-activity-in-arctic/article175606-76/ (accessed 19.04.2014).

[20] NATO: Russia is now an adversary. Russian moves in Ukraine pose 'grave challenge' to global security system, NATO official says/Associated Press. Published: May 2, 2014. URL: http://o.canada.com/news/nato-official-russian-moves-in-ukraine-pose-grave-challenge-to-global-security-system (accessed 02.05.2014).

[21] Rasmussen: Russia becomes an UN opponent. 05.05.2014. URL: http://www.bbc.co.uk/russian/rolling_news/2014/05/140505_rn_rasmussen_russia_relations.shtml (accessed 07.05.2014).

multipolar Arctic G-20 taking into account the fact that in G-8 our country is situated in all alone by total supremacy of the USA and its NATO allies, in their attempt in international isolation of the Russian Federation.

The acuteness of the problem contains the fact that *in the politics of the USA in spring 2014 it began to regenerate the back of the Cold war instruments*. According to «The New York Times»[22] president Obama and representatives of USA Nation Security Council formulate a new longstanding approach concerning Russia which represents *the adopted version of Cold war – containment strategy*. It was announced by that, that unequivocally that the problem is not in the Ukrainian crisis. Attempts are made fully to isolate Russia by the way of cutting off all economic and political connections, based on consensus against Russia, including in it even China, effectively to make us a pariah state.

Acting before the graduates of military college "West Point" on the 28th of May 2014, USA President Barack Obama publicly announced that his country could attain the international isolation of Russia. Because of American leadership the world immediately declaimed Russian actions. Europe and G-7 countries together slapped sanctions, NATO strengthened obligations before East-European allies, International Monetary Fund continues to strengthen economics of Ukraine, OSCE showed the world what really happened in unstable Ukrainian regions, — he told.[23].

Pic. 3. USA President B. Obama. URL: http://polit.ru/media/photolib/2014/06/-02/2014-06-02_190221 _1401721486.jpg

But visits of V.V. Putin in China and France, other facts, and the main — real weight of the Russian Federation in the world economic and geopolitical relations let us make a conclusion that attempts fully to isolate the country are unsuccessful and collapse.

Evident or latent back to the instruments of Cold war in new historic conditions, to my mind, really sharpen the situation in Arctic for some period of time. A dynamically changeable foreign policy, socio-economic situation in the world could achieve new risks and challenges for national interests of Russia, including Arctic, — was noticed on the meeting of Safety Council on the 22nd of April 2014[24].

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[22] Peter Baker. In Cold War Echo, Obama Strategy Writes Off Putin. April 19, 2014. URL: http://www.nytimes.com/2014/04/20/world/europe/in-cold-war-echo-obama-strategy-writes-off-putin.html?hp&_r=2 (accessed 20. 04.2014).

[23] Obama: America's leadership helped to cool Russia. URL: http://www.bbc.co.uk/russian/international/ 2014/05/140528_obama_speech_russia_ukraine.shtml (accessed 03.04.2014).

That's why it is important for ourselves to answer the question: "*Is it needful for Russia today freezing of dialogue connections, collaboration and cooperation in the Arctic?"* An answer to this question is evident for many of those, who really estimate the modern situation in Arctic. A permanent Arctic trend in Russia is determined by understanding of national interests as being deliberate demands of state, society and personality. *Firstly*, most of people in Russia are less interested in "the Curtain" from the past, military confrontation and in the rhetoric of the Cold war times. *Secondly*, our country in the Arctic just doesn't need alien territories, it is quite sufficient for us the great northern space, which it is important to rebuild according to the modern conditions, to develop infrastructure, to improve quality of population lives, its social identity. *Thirdly*, Russian State and business actively need international cooperation of strength for Arctic natural resources exploitation, modern technologies, providing our national interests (demands).

Problems of international cooperation in Arctic mustn't be idealized, papered, but there is also no need in demonstrating them. It is rather evident here the trend of activation of all the peoples and geopolitical activities' types, aggravation of economic competition. Natural resources and doubtless tourist potential of the Arctic region, its reviving transport marine and air communications not just attract careful attention of a person, business and society but also lead to development of different projects, dynamic increase of mobility and social activity. This process includes practically all the spheres of people's interests and activities. It concerns not only science and techniques, geopolitics of Arctic and other countries, but also tourism, journeys, mental-cultural life, social sphere of the northern societies.

2013 before our eyes the process which can be nominally called forming of ***Arctic multipolarity model*** of a modern changing world began to develop. There is a number of public councils, forums and committees in the Arctic region nowadays: the Northern Forum (1992), Council of Barents/Euroarctic region (1993), a Standing committee of Parliamentarian Conference of the Arctic region (1994) and many others. Including one or another international state structure in its activities, they in many cases pursue antithetic goals, affiliated with NATO, USA, UN. Though, and new political actors appear. Compared to Arctic Council, closed and bureaucratized structure, "The Arctic Circle" — opened noncommercial neopolitical organization — functions for already two years. It is a new Arctic field for easement of a dialogue and connecting relationships with also China, India and other countries, who have no say in the matter in the "Arctic Council".

[24] URL: http://президент.рф/новости/20845 (accessed 24.04.2014).

The mission of "The Arctic Circle" contains the idea of annual providing of forums for the parties concerned for easement of a dialogue, connecting relationships and discussing Arctic problems. The key word in definition of "The Arctic Circle" destination is the word "open", for all of us. The forum will be the most important place for carrying out Arctic questions dialogue and it will promote the strengthening of a decision-making process by the way of collaboration of international partners in the form of opened meetings and assemblies[25]. This public global field on Arctic problems, organized on nonprofit basis. Expert centers, business organizations, universities and non-governmental associations from the whole world could conduct meetings on "The Arctic Circle" platform, while not losing its institutional independence.

Start of activity of a new global organization was de facto given by the President of Iceland Ólafur Ragnar Grímsson on the 16th of April 2013 during his speech in Washington DC[26].

Pic. 4. The Arctic Circle - 2013. URL: AC_2013_HighlightGallery_010_V2.jpg

The first assembly of the Arctic Circle 12-14th of October 2013 connected more than 1200 high powered parties concerned from 40 countries all the eight Arctic countries and also France,

[25] Arctic Circle (web-site). URL: http://www.arcticcircle.org/mission (accessed 12.04.2014).

[26] The Future of the Arctic: A New Global Playing Field. Speaker: Ólafur Ragnar Grímsson, President, And Republic of Iceland President: Scott G. Borgerson, Co-Founder and Managing Director, Cargo Metrics. April 16, 2013. Council on Foreign Relations. URL: http://www.cfr.org/arctic/future-arctic-new-global-playing-field/p30471 (accessed 12. 04.2014).

China, India, Germany, Brazil, Korean Republic, Indonesia, Singapore and others. 20 plenary meetings were held during 3 days. These meetings concerned climate changes, dissolution of ice in Arctic, energy collaboration, Arctic safety; Arctic of regions versus globalized Arctic, Northern Sea routes: new era in the world navigation; business collaboration, perspectives of investments; marine rights, condition of Alaska, Russia and Arctic, future collaboration in Arctic; perspectives of Arctic tourism; rights of indigoes peoples; the Korean Republic in Arctic… On the public forum of the Arctic business-community problems and process of strengthening of business collaboration, developments of management structure were discussed. Panel discussions included economic development of Arctic, values of business collaboration and the presidency of the Arctic business. Every day sections on absolutely different problems were held. Among organizers there speak different people and organizations, also universities. That means that there was a real opportunity to claim the topic and invite people concerned for its discussing. All in all such a business and democratic atmosphere set this forum apart from other seriously organized and bureaucratic business events, when most of participants are considered to be just passive observers.

So public concurrence occurs and a new model of Arctic multipolarity appears. 31st of October – 2nd of November in Reykjavik (Iceland) for a second time an annual meeting of the Arctic Circle will take place. Next 2015 it is planned to carry out the business event in Anchorage (Alaska). Future meetings in the middle of a year will be held in Greenland and Singapore.

Intercivilizational challenge to the whole society connected with building of multicultural identity of earthlings, at any rate, demands rapprochement of ethnic groups, religions, cultures, also in Arctic, and at the same time it contradicts with demands on identity, regionalization, and also increase of new autonomic peoples' influence. Moreover, changes of fundamental living and cultural values, ready of people to change their freedom for safety, changes of social types of people are noticed [2, p.10]. Social idea of gender differences loses its meaning; a devaluation of conservative, even Christian values takes place. Conflictive by their meaning, these processes continue with great difficulty and costs. In many regions of the world as a source for these conflicts become the military nationalism ("the Right Sector" on Kiev Maidan, civil war in Ukraine is the bright example for it), spiritual and religious-political expansion. As a long-term perspective an importance of whole planetary agreements between already exist civilizations and confessions takes place. Such a tendency is impossible to foresee now, but conversely freezing is coming, including Arctic business.

Another global problem becomes the modernization of geopolitical vector of the Russian Federation. A hold course for the East is at any way positive in current situation, but it also has particular risks, when opening a new window of Eurasian opportunities.

Potential opportunities and challenges of Russian vector to China

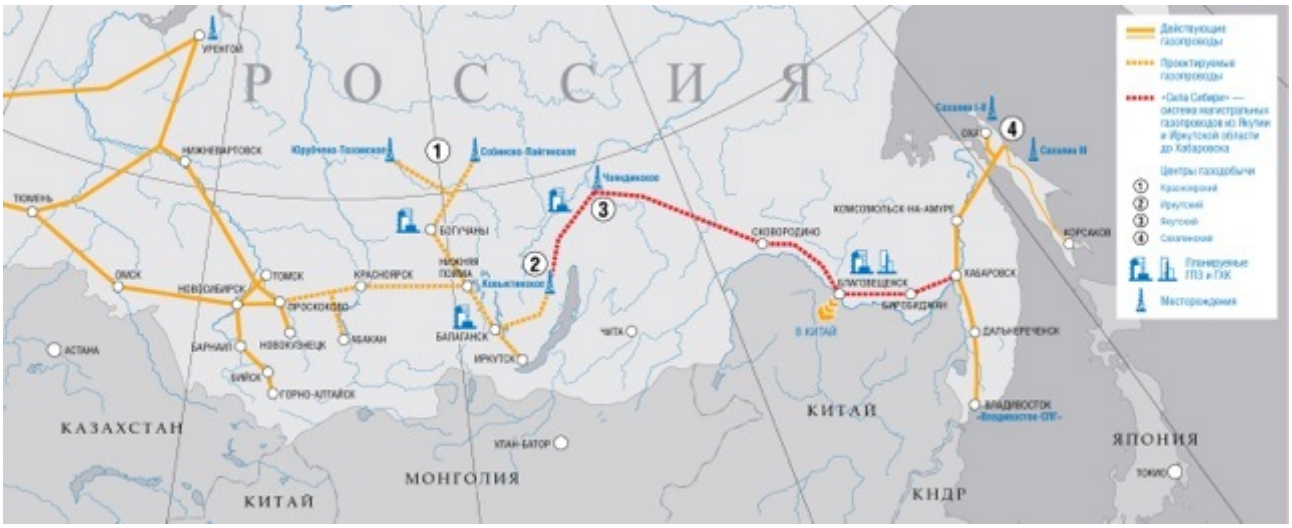
Pic. 5. V.V. Putin and Xi Jinping. URL: http://s00. yaplakal. com/pics/pics_original/1/2/6/74621. Jpg

I marked a question in "China up, Russia down" not coincidentally. It is not excluded that the vector of the nearest geopolitical future after back of Crimea into Russian Federation and visit of V.V. Putin in China, can be currently formulated in such a way: "China up, U.S. down". According to different estimates, China by years 2015, 2017 or 2019 will become the greatest economics in the world. When adjoining to it unpretentious Russian results (rates of economic growth in Russia are really still low), and other resources we can get global economic, demographic and military potential which leaves behind USA. However, the question is mostly not about such a potential but about geopolitical, cultural-civilization connection in Eurasia. Rapprochement of Russian and Chinese civilizations is determined by short-sighted USA politics based on exclusiveness, special mission in a changeable world. Regional instability, when using the concepts of analyzed American report, seriously converge the Russian borders, increasing by that "Potential for Increased conflict". NATO, when changing the military potential to the western borders of the RF makes our country to search strategic collaborators in the East to provide our security. In conditions of permanent coercion on our country and applying of different sanctions on our country after back of Crimea in RF, in keeping with classic of conflict management, it appears not only growth of Russians' cohesion, but also *changing of poles* in civilized paradigm of international relations and choosing of Eurasian geopolitical vector.

Answering the sanctions against our country and attempts of its isolation, vector of Russian geopolitics and economics more and more turns to the East. During the visit of V.V. Putin in China it was announced of a new era of overall collaboration and strategic connections; trend for rapprochement of the Russian Federation and PRC as part of multipolarity was clearly outlined. Russia and China arranged to regulate their foreign policy steps closer, including UNO, SCO, BRICS, APEC,

Conferences on Interaction and Confidence-building in Asia, G-20 and other structures of international economic collaboration for formation of just, harmonic and safety world order[27].

Bur it is important to find answers and to the question: whether trend for rapprochement with China is in keeping with national interests of Russia in long-term perspective or we just have no way out after Crimea? The more probable answer sounds positively: "Yes, in the current situation it is. *Politically*, taking into account trend of multipolarity, under circumstances of Eurasian concerted policy, including projects "Economic zone of the Silk Road" and "Eurasian Economic Union", according to the principles of solidity and collaboration.



Pic.6. Pipe-line "Strength of Siberia": Yakutia – Khabarovsk – Vladivostok = 3200 км; Irkutsk region – Yakutia = 800 km; 61 bln. square meters of gas pro year; 1st turn in 2017.
URL: http://www.gazprom.ru/f/posts/97/931837/2014-06-19-map-sila-sib-ru.jpg

Economically new opportunities are opening*:* a contract of Gazprom and CNPC is awarded ($400 bln. for 30 years; 38 bln. Cubic meters of gas per year, all in all 1,14 trillion m^3; pipe-line "Strength of Siberia) and other agreements. In a common announcement of the RF and PRC it is planned to improve conditions for transit of Chinese freights through the net of Russian railways, ports of the Far East and also through the Northern Sea Route.

Together with this it is also important to answer the question: *How dangerous is for Russia trend to the East, what potentially in future possible challenges could appear?* Together with appearing analytics we can point a number of problematic issues:

1. Struggle for communications in Arctic (forecasting large scale appearance of Chinese ice-breakers and carriers on the Northern Sea Route).
2. Contingence of Eurasian integration projects: "Economic zone of the Silk Road" and "Eurasian Economic Union"?

[27] A common announcement of the Russian Federation and People's Republic of China about new era in overall collaboration and strategic connections. URL: http://news.kremlin.ru/ref_notes/1642 (accessed 21.05.2014).

3. A severe competition at the market of hydrocarbon export to the Asia.
4. Danger of transformation of Russian economics as a raw-exports role according to industrially developed China, which include usage of Russian Arctic and the North.
5. Latent assimilation by Chinese of Russian population of the Far East, Siberia, North and later everywhere.
6. Political instability in PRC (D. Travin, SBR, 18.04.2014).

Firstly, Russia at any way expects an absolutely real competition with china when usage of transport communications in Arctic. When giving a priority to high-latitude, circumpolar routes, Chinese navigation companies by that way decrease the profitableness of the Northern Sea Route and its importance. This will promote enter to polar route of Chinese ice-breakers. Is Russia ready to let Chinese ice-breakers to the competitive navigation through traditional routes of the Northern Sea Route in conditions of cargo carriage from Europe to china and back volume growth?

In common Russia gets some perspective of transformation as a raw-exports role of China, which naturally needs no competition as being an industrially developed state. Here we speak not only about Northern Sea Route, but about other spheres of economics and social activities. North of Russia, Arkhangelsk (Belkomur), Arctic marine port Sabetta, Western and Eastern Siberia, Far East, OAO “Gazprom” and “Rosneft”, other Arctic stakeholders are even more oriented on inflow of investments from China.

After creation of Eurasian Economic Union from the 1st of January 2015 the importance of integration processes in Asia complementarity increases on the Eurasian field as well as in Europe. By that fact here appears a problem of searching for ways of possible conjugacy of “Economic zone of the Silk Road” (EZSR) and “Eurasian Economic Union” (EEU). In a common announcement of RF and PRC (20.05.2014) it is underlined that Russia considers initiative of China to be important in forming of “Economic zone of the Silk Road” and highly appreciate ready of Chinese party to take into account Russian interests during its development and realization.

EZSR – is an infrastructure megaproject of transeurasian integration from Pacific to the Atlantic Ocean, creation of free trading zones. Its main function – is fast delivery of goods from Asia to EU. Market of 18 European and Asian countries, 3 billion people = 40% of Earth population[28].

Multidimensional innovation model of regional collaboration could help Eurasian countries to widen geo-economics space for development by the way of forming of following directions (8 corridors): transport,energetic, trade, informational, science-technical, agricultural reclamation, touristic development, safety and political interactions.

[28] URL: http://chinalogist.ru/book/articles/analitika/ekonomicheskiy-poyas-shelkovyy-put-zapolnyaemaya-pustota

And China will in practice take a mild “economic” control under the whole Eurasia from China and Central Asia to Eastern and Western Europe. Just business and no politics in comparison with USA hegemony, neoliberal globalization and American project of Great silk route. A Chinese project is designed to investments and foresees a creation of a common Eurasian space and trans-continental trunk from London to Shanghais including active Channel and Bosporus tunnels [8, V.A. Dergachev].

Pic. 7. URL: http://www.dergachev.ru/images/The_Great_Silk_Road/04-05.jpg

One more, still virtual problem is theoretically connected with climate changes and China population migration to Siberia and the North as a result of appearing chaos. Though, it has practically begun a latent assimilation of Russian population by the Chinese. It is referred to autonomous Chinese communities, interracial Chinese-Russian marriages, acquisition of ground, accommodation, producing and trading power supply ownership. Migration from China has its advantages, but where are its borders and how will be its consequences in for example 10 years? What it will appear on cultural and living level by strong interrelation of two civilizations – Russian and great Chinese? Here are still no answers.

Because of attempts of a permanent sup-plantation of Russian companies from the European market, a value of diversification of energy products outlet increases and competition between suppliers of hydrocarbons from different countries of the world escalates [9].

Table 1

European and Asian hydrocarbon markets (2012)

Hydrocarbon markets: Consumptions and supply 2012	Oil, mln. tones	Gas, bln square m.
European market (EU, Eastern Europe countries, Turkey)	684,2	576,2
Part of Russian supply on the European market from common consumption in percent	37,4%	32,3 %
Japan, South Korea, China	810,7	300,5
Part of Russian supply on the Asian market from common consumption in percent	7,2%	4,8%

Made by: Inozemzev V. Opinion: will Russia be saved by turn to the East. 23.04.2014. URL: http://rbcdaily.ru/economy/562949991273154

And finally, mass media discuss sustainability in the perspective of politics in People's Republic China. Authoritarian government can't last forever and, as usual, it ruins, "turn to the East" is dangerous — prevents Dmitri Travin, a scientific manager of Centre of modernization researches of European university in Saint-Petersburg [10]. We can either agree or disagree this opinion, but the problem takes place, it is current and asks for thorough analysis. It is important to take into account that Chinese population according to 06.07. 2014 is 1 bln. 367 mln. people [29]. Great economic and PRC population scales in circle development conditions can cause the same great convulsion of the whole global society, not excluding Russia and the Arctic region.

Nowadays everything spoken above is just potential opportunities and challenges, hypothesis and forecasts. We must not be afraid of anything! It is right. But also to forget that we live in conditions of permanent crisis instability, in a rapidly changing world, not always foreseeable will be not right. Measure thrice and cut once — so it is said in a Russian proverb. But nowadays the problem contains that there is sometimes no time for measuring, we must cut then and there. So is the dynamic historic time of a governed chaos where all of us live, in the era of changes in the beginning of the 21st century.

Conclusion

The process of personal international hegemony of the USA as a "common world policeman" and the main protector of "American way and image democracy" is evidently finishing in the world in this way in the nearest future. Change of common geopolitical paradigm in conditions of multipolarity increase, clumsy attempts to isolate Russia and to make it an outlaw also influences

[29] Counter of Chinese population. URL: http://countrymeters.info/ru/China (accessed 29.06.2014).

the situation in the Arctic region. It is rather understandable that a detailed analysis of the situation, appearing around Arctic because of new geopolitical reboot in a global world society; reformatting of the whole system; attempts of "united Arctic fronts" and back to instruments of Cold war by the way of Russian inhibition, is important.

A new format of Arctic relations is possible. In a changed situation, connected with the phase of Crimea reversal in geopolitics, whether it is possible to wait for structural interaction, without sanctions, in exploitation of Arctic resources and the activity of the Arctic Council where basically NATO runs the show? To my mind, it is very important to understand which Arctic *model of multipolarity is the most appropriate for Russia*. The issue remains open. Variants of stakeholders interactions in different international structures: AG-8, AG-20, the Arctic Circle and others are possible.

It cannot go unnoticed that rethinking of national interests as felt-need of a society, state and a person in the Russian Arctic, of the whole complex of appearing here problems of management, socio-economic development, marine politics, security providing, interregional integration of AZRF lands becomes current nowadays. In conditions of conflict potential increase and taken trend to the East, some Arctic problems are like to sink down on the back burner. Large-scale Arctic breakthrough is stuck and lack of resources, including financial, for realization of state programs is not the main reason here. We can notice changes in governing of Russian Arctic on both federal and regional levels. Still problem of effective system of Arctic management foundation with responsible federal authority (Minarctic), who is credentialed and has professional competencies, is current. An urgent necessity of natural competitive advantages strengthening in realization of marine politics in Arctic is announced in the article S.U.Kozmenko, V.S.Selina and A.A.Chegolkova "Of RF Arctic marine politics" [11] and in other works.

Supplying of permanent Russian presence in Arctic, including islands and the Arctic Ocean waters, in different forms and ways, increase of economics and human capital formation, and also potential of society social cohesion and interregional integration are the top-priority aim not only for Russian state but also for the whole society, when remembering by that personal national interests, demands of all indigoes peoples of the North (big and small), save of their cultural values. All that has chances to become the key trend of socio-economic development of the Russian Federation Arctic zone for years and decades for the future.

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LABOR POTENTIAL OF THE RUSSIAN ARCTIC

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Abstract. Demographic and migratory processes are analyzed, as well as the effect of low life level on the development of labor potential of the regions of the Russian Arctic

Keywords: *regions, Arctic, North, processes, labor potential, resources, demography, migration, standard of living*

Introduction

Together with natural-recourses, production and financial potentials, the labor potential of society is considered to be an important part of economic development and the base of the modern market economics on both regional level and on a global scale. When researching labor potential of the country and its region many scientists note that these are concerned labor resources, issuing in the aspect of its quality and quantity parts community. Methodologically as the base indicators of labor potential development, L.A.Popova and M.A.Terentyeva, for example, are issuing: 1) activity rate in common population; 2) level of education, professional performance, occupational retraining, qualification and experience, which act to raise efficiency of the employee; 3) level of salary; 4) conditioning with needful issues and instruments of labor; 5) level of employment and labor activity [1].

Doctor of economical sciences V.V.Frauzer, when issuing the demographic potential of northern Russian regions as factor of economic exploration of the Arctic, analyses different treatments of labor and demographic potential definitions, which can be founded in scientific literature. In particular, he pays attention on the fact, that demographic potential of regional economics is not identical to labor potential. In regions with active migration, in which we can include northern territories of Russia, according to V.V.Frauzer, role of migration in population formation in particular periods is determinative in comparison with natural increase [2].

Anyway, labor market and its potential volume in regions is determined by quantity of region's activity rate, and market development determinants are factors and labor demands, situated on its territory. When analyzing the labor potential of northern territories it would be rather

viable to consider questions, which answers are to be the first for securing of sustainable development of labor market, and as a result for increasing of innovational attractiveness of the region: demographic and migration processes, influence of low living level on development of labor potential of arctic countries of the RF. Under region in this article we understand territorial entity of the RF (region = territorial entity of the RF).

It is crucially important to define the *target of research* because of wide development of the concept "Northern Arctic region" (NAR). The target of research in this article is 2 territorial entities of the RF including 3 republics, 3 autonomous areas, 2 regions and Krasnoyarsk Krai. This "region" can't be called "Northern-Arctic" as it initially has a greatly wide international definition. It usually includes territorial entities of only RF. It is absolutely not understandable why in the Northern-Arctic region are not included provinces and states of Canada, Norway, USA, Sweden and other northern and arctic countries, which are also situated in the Arctic and on the North of our planet. To unite two transnational macroregions Arctic and the North into the one "Northern-Arctic region", it is important as minimum to give scientific credence in this way to the definition of such a common "region", and particularly, macroregion — its unity and characteristics, which mark this region from other territories. As it was noticed in the XVI Solovetsky Forum, there is still no such credence, but the formation of myths prospers [3].

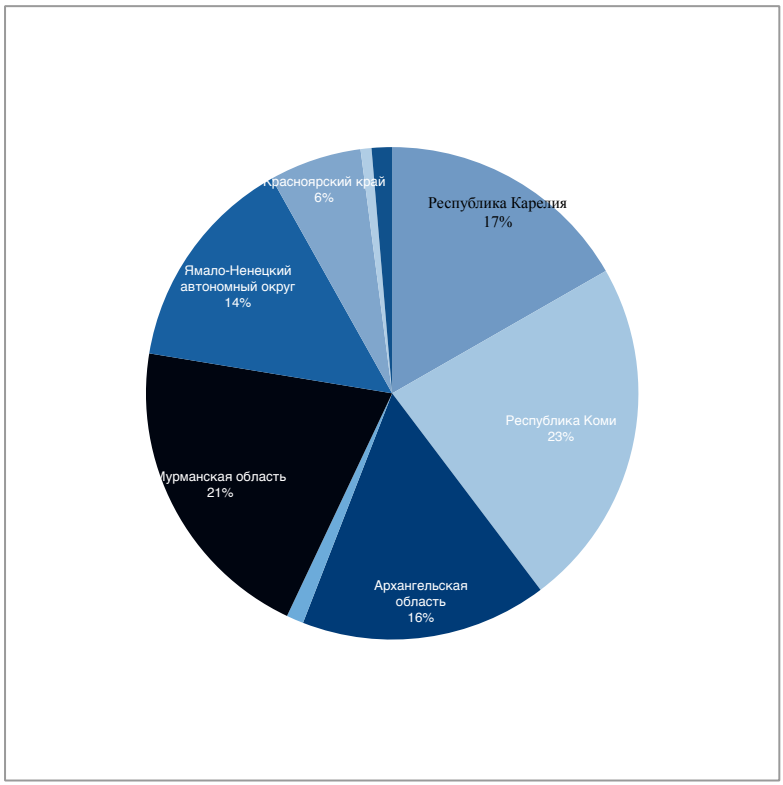
In official Russian documents Arctic and the North are used independently on their own and don't possess the same region. Russian Arctic includes 9 territorial entities of the RF, in comparison with the North of Russian which contains more than 20 territorial entities of the RF. In fact, all the entities of the RF, which fully or partly enter AZRF, are included within the Russia's High North. According to the executive order of the Russian president № 296 from the 2nd of May 2014, within the RF land territories are included territories of only eight territorial entities of the RF, and also lands and islands situated in the Arctic Ocean, appointed in the act of CEC USSR presidium from the 15th of April 1926 and in other USSR acts[1]. This article was written when the executive order of the Russian president № 296 still wasn't signed, so the target of research are not only land territories of AZRF (8 territorial entities), but the whole "Russian Arctic", which includes 9 territorial entities of the RF, pointed earlier in the project of the federal law about AZRF (2013). Analysis of statistics in such a way is provided all in all within the nine arctic territorial entities of the RF, without statistics of other municipal entities.

[1] Executive order of the Russian president "Of the Russian Federation Arctic Zone land territories" 2nd of May 2014 № 296. URL: http://президент.рф/документы/20895 (accessed 05.05.2014).

Demographic and migration processes

When analyzing the condition of demographic and migration processes in the Russian Arctic, we can note the appearing awfully negative situation on labor market. Common population of the investigated 9 northern regions, including all territorial entities of the RF, estimates 2,6% of the Russian population (143,5 mln. people). Economically active population estimates 60% (2,3-2,5 mln. people), and it is less than 2% of Russian population. This situation redoubles by the great territorial potential of 9 arctic regions of the RF (4,3 mln. square km), which possesses one fourth of the whole Russian space (17,1 mln. square km.). With such an extension, the population density is exceptionally low and erratic. Speaking about population distribution, the investigated northern macroregion, which mostly includes entities of the Russian Arctic zone, is characterized by explicit irregularity of populating (pic.1).

Pic.1. Structure of the whole population of 9 territorial entities of the RF. Sources: Federal State Statistics Service / official web. URL: http://www.gks.ru. Government of the Arkhangelsk region/official web. URL: http://www.dvinaland.ru



According to the data of Federal State Statistics Service, the biggest population density is characteristic for the most economically and infrastructure developed territory — the Murmansk region, where the density index is 5,4 people pro square km. The medium population density is in the Arkhangelsk region (3,25 people/sq. km) and Komi Republic (2 people/sq.km). And the smallest is in the Nenets Autonomous Area – 0,24 people.

But all in all the issued northern regions — are small populated territory with removed cities and with rate of density on 1 sq. km is 0,88 people/sq. km (table1), what is less than Russian index in 9,5 times.

Table 1

Population density of 9 northern Russian territorial entities in 2013

Russian territorial entities	Population density, people/ sq.km
Karelia Republic	3,68
Komi Republic	2,10
Arkhangelsk region	3,25
Nenets Autonomous Area	0,24
Murmansk region	5,39
Krasnoyarsk Krai	0,49
Saha Republic (Yakutia)	0,38
Chukotski Autonomous Area	0,04
Yamalo-Nenets Autonomous Area	0,07
Common density	0,88

Source: Federal State Statistics Service / official web. URL: http://www.gks.ru.

For northern territories it is characteristic the decrease of population. From 1990 to 2011 population of the whole North of Russia decreased from 9,8 mln. To 7,9 mln. people, that means that the common loss of northern territories arranged 1 mln. 840 thousand people. By that the European part includes 67,6% of loss, the Asian one — 32,4% [2, Fauzer V.V.]. Identical processes take place in the Russian Arctic as well, which is the integrated high-latitude part of the Russian North. The greatest losses in the European North got Murmansk region — 396 thousand people (33,2% from the common population in the year 1990). Then follow Komi Republic — 349 thousand people (27,9%); Arkhangelsk region — 351 thousand people (22,3%); Karelia Republic — 148 thousand people (18,7%) [2].

By this labor rates because of population decline also labor potential of the Arctic territory decreases in the 21st century.

Lowering of population density of the northern regions is noticed by both natural loss and migration outflow. A migration outflow of population undermines the “miserable” labor potential, which represents the territory of the country with extreme conditions of life and work, based on natural-climate and undeveloped economic-geographical conditions (vehicle access, level of social infrastructure development). A migration outflow shows the world trend of population movement in

more comfortable conditions, that means in middle and southern inland, and mostly it appears in northern countries (Sweden, Norway, Canada and north of the USA) [5, pp.97-102]. It is important to notice that among the reasons for population decline in the 21st century, which is common for all the 23 northern territories of Russia, there takes place not only natural loss but also an outlined trend for out migration in warmer places and big metropolitan cities [6, pp.178-179]. Negative exponent of population increase is also connected with aging of population and migration misbalance of young population. In relatively render habitable of the North, such as Arkhangelsk and Murmansk regions, Karelia and Komi Republics a stable in migration population is formed, rate of old population is about or even more than 20%. To the youngest regions we can take Yamalo-Nenets (7,8%), Chukotski (10,3%), Taimirski (Dolgano-Nenets) (10,4%), Hanti-Mansyiski (10,6%) autonomous areas, where the age structure until later depended on migration, which kept alive the permanent increase of population and gravity of cohorts of age groups [2].

According to the data of FSSS, such a negative trend will be preserved in the nearest 5-7 years. Population decrease is illustrative for Arkhangelsk and Murmansk regions, where the population decline by the year 2016 will possess 5% and 8% correspondingly to the level of the year 2004. In Komi Republic together with young population we will notice less decline of population, which will be about 2%.

But in comparison with other northern countries there is some advantage. There are more people in the Russian North than in other northern countries. According to this data, Russian North can be currently called extra populated. This advantage can let to save labor potential only by introducing of great actions on infrastructure and transit development of the northern territorial entities of the RF, formation of highly remunerative production in oil-and-gas, pulp and paper and machine building complexes, education of science-technical and innovational clusters.

The other positive moment in formation of labor potential on the Russian North is considered to be a minority stake of incapacitated persons in comparison with Russian data. Rate of able-bodied citizens on the north contains 66,5%, and Russian index is 62-62,5%[2]. More able-bodied citizens are in Murmansk region (69,2%) and Komi Republic (67,2%), and the least is in Arkhangelsk region (64%) [3]. For NAA another trend is characteristic, which appears in natural increase

[2] Federal State Statistics Service/official web. URL: http://www.gks.ru (accessed 20.02. 2014).
[3] Government of Arkhangelsk region/official web. URL: http://www.dvinaland.ru/ (accessed 20.02. 2014).

of young population, who was formed as a result of later migration (in 80-90s) and higher birth rate of indigoes population[4].

Employment and economic activity of population

An important direction of labor potential development is considered to be the increase of population employment, what is connected with labor demands of productions, and they determine level of employment on labor market, which is nowadays a little higher than the Russian one. So, level of employment on the North of Russia in the year 2012 (table 2) was 65-67% (in arctic territories — 71-72%) by average in the RF 64% (в 2000 г. — 61,9%, 66,5% and 58,5% correspondingly) [5].

Table 2

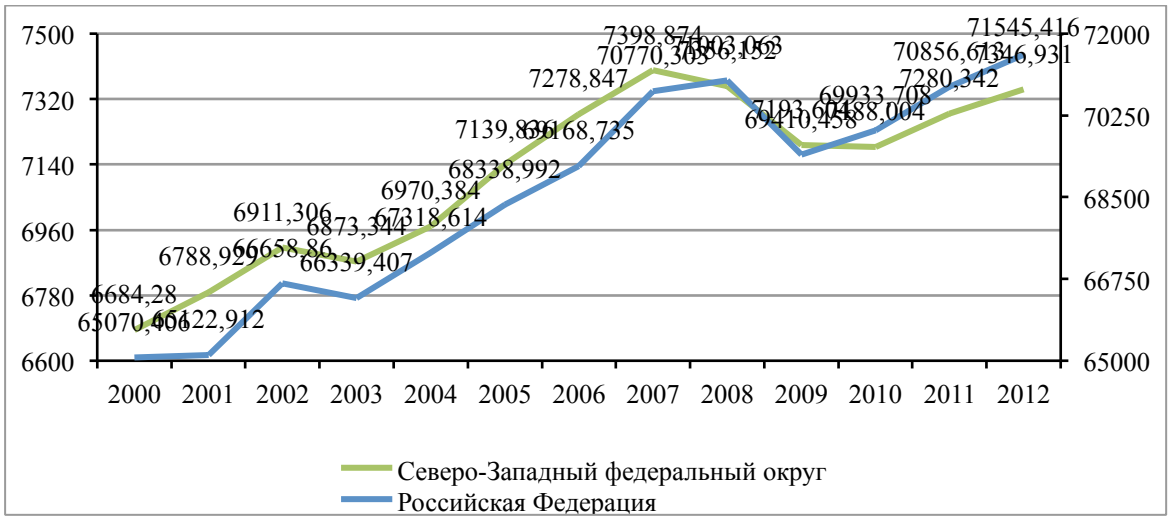
An average number of employed in territorial entities of the RF pre year, thousand people

	2000	2005	2011	2012
Russian Federation	**65070,4**	**68339,0**	**70856,6**	**71545,4**
Central Federal District	18014,4	19159,4	20056,9	20382,6
North-Western Federal District	***6684,3***	***7139,8***	***7280,3***	***7346,9***
Karelia Republic	338,0	339,3	310,7	306,9
Komi Republic	481,9	479,1	456,9	460,2
Arkhangelsk region	634,4	657,0	622,8	602,0
Nenets Autonomous Area	19,8	20,8	20,7	21,2
Murmansk region	469,6	465,3	430,7	434,6
Southern Federal District	5850,8	6163,8	6486,8	6559,6
North-Caucasian Federal District	2604,0	2975,7	3791,4	3898,6
Privolzhsky Federal District	14242,8	14536,5	14800,8	14883,2
Ural Federal District	***5720,0***	***6019,0***	***6102,3***	***6158,7***
Yamalo-Nenets Autonomous Area	274,0	286,5	310,6	321,6
Siberian Federal District	***8784,6***	***9162,2***	***9133,4***	***9116,8***
Krasnoyarsk Krai	1360,4	1452,4	1420,8	1428,8
Far-Eastern Federal District	***3169,5***	***3182,6***	***3204,7***	***3199,0***
Saha Republic (Yakutia)	430,6	441,2	447,9	460,3
Chukotski Autonomous Area	32,3	31,2	30,8	31,5

Source: Federal State Statistics Service/official web. URL: http://www.gks.ru.

[4] Ibid. URL: http://www.dvinaland.ru/ (accessed 20.02.2014).
[5] Federal State Statistics Service/official web. URL: http://www.gks.ru

It is also important to notice that in spite of negative migration process and decrease of population rates, the index of employment after the cutback of economic activity 2008-2009 has a positive dynamics on the northern territories of Russia (pic. 2).



Pic. 2. Dynamics of population employment in Russia, thousand people//Federal State Statistics Service/official web. URL: http://www.gks.ru

An illustrative mark of Northern labor market is considered to be the positive dynamics of population economic activity, which is higher that Russian average index. All in all for an issued region the level of economic activity for the last 2 years arranged 71-72% (on arctic territories — 76%) by the average Russian level 68-69% . These indexes for the last decade grew on 1-3% (table 3).

Table 3

Level of average population economic activity on the territorial entities in the RF, %

	2000	2005	2011	2012
Russian Federation	65,5	66,0	68,3	68,7
Central Federal District	65,9	66,6	69,2	70,0
North-Western Federal District	66,4	68,8	71,4	71,5
Karelia Republic	67,0	67,9	67,9	66,9
Komi Republic	67,2	68,6	70,4	70,8
Arkhangelsk region	68,0	67,8	69,5	68,0
Nenets Autonomous Area	73,8	72,9	71,6	71,7
Murmansk region	72,1	72,8	73,9	74,9
Southern Federal District	62,8	62,5	65,1	65,6
North-Caucasian Federal District	61,2	62,2	64,6	65,3
Privolzhsky Federal District	65,9	65,8	68,4	68,6

Ural Federal District	66,6	67,3	69,8	70,1
Yamalo-Nenets Autonomous Area	80,5	76,3	78,1	79,0
Siberian Federal District	65,0	65,9	66,9	66,6
Krasnoyarsk Krai	67,3	70,4	68,3	68,6
Far-Eastern Federal District	68,2	66,5	69,6	69,6
Saha Republic (Yakutia)	69,9	68,1	68,1	69,8
Chukotski Autonomous Area	76,0	78,8	83,0	82,5

Sources: Federal State Statistics Service/official web. URL: http://www.gks.ru, Government of Arkhangelsk region/ official web. URL: http://www.dvinaland.ru

Living standards of the population

Perspectives of Russian Arctic labor market and its labor potential development depend on socio-economic constituent, which is mostly evident in squaring of labor price and determine the quality of population living. Analysis of average rated wage paid data in Arkhangelsk region from the year 2000 shows the trend to rapprochement of salaries in northern and arctic territories with average Russian ones, what demonstrates the lowering of efficiency of already existed system of regional regulation of labor compensation (table 4).

Table 4

An average rated wage paid, rub.

	2006	2007	2008	2009	2010	2011	2012
Russian Federation	10634	13593	17290	18638	20952	23369	26629
Arkhangelsk region	11725	14400	18181	20243	22189	24609	28900

Source: RF Treasury / official web. URL: http://info.minfin.ru

The last year was illustrator, when the average salary in some northern territorial entities became less than the average Russian one. For example, in Arkhangelsk region by the 1st of January it was 39340 rubles for 1 person, and in Russia the average number was 39665 rub., and by the end of the half year 2013 — 30218 rub. и 33103 rub. correspondingly[6]. But there is also a great differentiation by both density and by level of salary. So, in the Nenets Autonomous Area a monthly average rated wage of people who work in the sphere of economics was in the year 2012 242,4% from the average in Russia. But the index of average salary, accounted separately from private consumption, doesn't give a real economic view of population living quality, which pro-

[6] RF Treasury / official web. URL: http://info.minfin.ru (accessed 20.02. 2014).

motes the formation of labor potential. Comparison of salary with a living wage of able-bodied citizens shows that *North takes the leading place in regions by economic poverty*. 2011-2012 for about 9-10% members of productions, organizations and offices of the Russian North got wages smaller than the living wage of able-bodied citizens, average in arctic territories — 5%, average throughout Russia — 13-14% (tables. 5 и 6).

Table 5

Personal income, rub.

	Arkhangelsk region		Including Nenets Autonomous Area	
	2012r. IV qtr.	2011r. IV qtr.	2012r. IV qtr.	2011r. IV qtr.
An average personal income to the rate of the whole population living wage	324,6	305,3	531,6	585
An average monthly salary of one person to the rate of living wage of able-bodied citizens	355,9	330,3	482,5	438,5

Source: Government of Arkhangelsk region / official web. URL: http://www.dvinaland.ru

High level of economic poverty is estimated in Arkhangelsk region (17%), Saha Republic (Yakutia) (14%). The lowest poverty according to the analyzed statistics is noticed in Yamalo-Nenets Autonomous Area (2,6%).

Table 6

Living wage, rub.

Territorial entity	4 qtr. 2012		3 qtr. 2013	
	For a person	For able-bodied citizens	For a person	For able-bodied citizens
Russian Federation	6705	7263	7429	8014
Karelia Republic	7633	8274	8478	9114
Komi Republic	8293	9924	9496	10113
Arkhangelsk region	8159	8880	9698	10420
Nenets Autonomous Area	12562	13655	15689	16361
Murmansk region	9315	9590	10241	10723
Krasnoyarsk Krai	7715	8268	8661	8914
Saha Republic (Yakutia)	10682	11572	11531	12514
Chukotski Autonomous Area	12157	12401	13092	13388

Yamalo-Nenets Autonomous Area	10851	11337	12370	12837
Leningrad region	6155	6450	6415	6757
Moscow region	7223	8035	8257	9218

Source: RF Treasury / official web. URL: http://info.minfin.ru

M.R. Moskalenko and E.M. Kropanaeva when analyzing specialties of human capital and development of the Russian Arctic underlined that salary of Russian Arctic macroregion citizen is 3-4 times lower than of the citizens of other developed countries in Arctic. When a Russian has demands to living quality (consumption, comfort, education) near to the demands of developed country citizen that evidently means that he has to work more, even overtime, to provide at least partly all the increasing demands [7].

Many quality indexes of labor resources leave much to be desired. L.A. Popova and M.A. Terentyeva noticed in their article that in most of northern regions the expected lifetime of population is traditionally lower than the average in the country. Correspondingly, the labor lifetime is lower. The only exception are Hanty-Mansiysk and Yamalo-Nenets Autonomous areas, where high rates of lifetime are due to low mortality of working age males from endogenous reasons because of their groundbreaking rotation and low mortality of old population, that means «challenge of death» in southern regions [1]. Also in most of northern regions not only index of professional education of occupied population is lower than average but also rate of its increase in years 2002-2010.

In scientific literature it is also underlined that *phenomenon of economic poverty* appears as a reaction on socio-economic system of the northern region, on imperfection of its functioning institutional conditions. An institutional factor plays especially important role in formation of economic poverty because on the northern territories function state and specifically northern institutes which possess a number of fundamental defects. By that, the main role plays the imperfection of regulatory guarantee system functioning and compensations affairs for people who work in the regions of the RF North and Arctic, including lack of regulatory acts which allocate the list of the RF North and Arctic regions, definitions and rate of regional salary coefficient, rate of prorated increases according to reference of the territory to the region of the RF North and Arctic; and to the work experience on productions and in organizations situated on these territories [8, pp. 180-181].

In socio-economic development of Russian northern and arctic territories there are a number of other problems. Quality of labor resources, population life-sustaining activities, social identity,

problems of human capital concentration are still the main arctic challenges for the modern Russia. A danger appears that population of Russian Arctic could not only become the factor of modernization but also will not be able to support the infrastructure of AZRF economics even on the current, not so high [4].

Conclusion

Labor resources provide formation of national and regional inputs in modern conditions of transition to innovation development of economics. Increase of labor resources potential and also concentration of human capital are considered to be the main direction of longstanding socio-economic development of the Russian Federation. This article introduces only some part of undertaken research of labor market of nine northern and arctic regions of Russia, but even this analysis shows that there are acute problems and difficulties in development of labor market and its potential. Labor market of the North, including arctic territorial entities of the RF, doesn't answer modern conditions of innovational development and becomes the deterrent of its socio-economic renewal. That's why efficiency of economy development and increase of its investments attraction depends much on tactic and strategic activities on development and increase of labor potential, of human potential concentration in the Russian Arctic. At any way, this problem needs further investigation and analysis.

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HISTORICAL SCIENCES

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THE INTERACTION OF THE REGIONAL GOVERNMENT AND INDIGENOUS PEOPLES: THE ROLE OF THE SCIENTIFIC COMMUNITY OF YAKUTIA (80s - EARLY 90s OF THE 20th CENTURY)

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Abstract: The role of scientific institutions and individual scientists of Yakutia in establishing the relationships between the government and the indigenous peoples of the North is shown. The scientific community has not only identified the main challenges the people of the North face, but also presented possible solutions.

Keywords: *indigenous peoples of the North, Yakutia, regional policy, scientific community*

Introduction

In the 80s of the 20th century appeared a new line of state politics about the indigoes Northern peoples. Firstly, it was connected with changes, which happened in the socio-economic part of traditional Northern peoples habitations regions, which sufficiently influenced and continue to influence their lives. These changes touched also Yakutia. By the middle of the 80s in Yakutia appeared new centers of republic production development, mineral resources exploration rushed, population grew, and railroad service was founded. Nowadays indigoes peoples of Yakutia stand before a challenge of new industrial development of their resettlement territories, which groundings were given in the soviet period. Because of it we would like to overview forms of Soviet power and small indigoes peoples of the North (later SIPN) interaction in the 80s – beginning of the 90s of the 20th century.

Interaction of power, scientific society and SIPN

When analyzing the soviet state politics concerning Northern peoples and “socialistic model” of state and SIPN interaction in the investigating period, we can point some most effective forms of such an interaction: official ways of state governmental bodies functioning, non-governmental organizations, mass media and also scientific researches and actions. Increasing of a role of scientific organizations and representatives of scientific brainpower in networking between

power and SIPN in the given historical period and also opportunity of appointing problems on the both scientific and social levels became more efficient with the development of democratic freedoms in the country.

A tight "union" of science and state governmental bodies took place in the USSR, though representatives of power had an opportunity to ignore recommendations of a scientific society. At the same time an interconnection of power and science, on one hand, let scientific organizations to attain support from the top echelon of a political party and the state. On the other hand, scientific researches were under a special control of the state. A special custody was taken of humanities.

Interconnections of government and scientific community became one of the current topics in modern scientific researches. An interest was attracted mostly by the fact that in a post-Soviet period in Russia not only character and direction of scientific researches changed, but also a transformation of a model of science in common took place. Study of interconnections of government and science practice on different stages of historic development got in modern realties a practical relevance. A special interest in this research is paid to works, which enlighten theoretical aspects of government and science interconnections: T.D. Solovey [1, 2004], T.O.Mashkovskaya [2, 2000], V.P.Makarenko [3, 2007] and others. From these works we can get one important moment. A scientific community with weakening of soviet state gradually leaves the borders of governmental structures. And by the 80s of the 20th century science turned to society, now she tried not to be the part of apparatus, but become the part of society.

In the first part of the 80s state distinctly defined the demand in building relationships between science and government practice, what was embodied in the program "Social and economic development of Northern population in conditions of scientific-and-technological advance" ("Population of the North") [1, 1988]. Development of this program became possible after acceptance of the CPSU Central Committee and USSR Cabinet enactment from the 7th of February 1980 № 115 «Of measures for the future economic and social development of Northern peoples inhabitancy»[1], which though its contradictory, is rather positively estimated by researchers. A scientific interest concerning Northern population has increased, research works began to accelerate, also because of funding enlargement.

Before program development a lot of effort was put in. *Firstly*, by Decree of the Council of Ministers of the Russian SFSR from the 21st of July 1981, in February 1982 a Regional interdepartmental commission on coordination of complex socio-economic, biomedical and linguistic

[1] Central Committee in resolutions and decisions of congresses, conferences and plenums CPSU. T.13. p. 568.

researches of problems of Northern peoples development (later CCRNP) was created. *Secondly*, conditions of investigations were analyzed and a scientific potential of specialists, who deal with the Northern peoples, was defined. *Thirdly*, scientific conferences on problems of Northern peoples development were held and a number of material were published, including in Yakutsk in June 1983 an All-Union meeting "Food resources and nutrition improvement of the Far North population". All the stages were controlled by the Council of Ministers of the Russian SFSR and CCRNP. As a result not only investigations' directions were worked out, but also practice suggestions, which promote improvement of ISPN living conditions, were formulated[2].

A program "Northern peoples" was focused on increasing of investigation of Northern peoples development problems efficiency. As part of a program a concept of community development of Northern peoples was worked up, a strategy and tactics of its development managing processes in conditions of industrial exploitation were defined, and also some practical recommendations were developed [4, pp. 6-7].

At the initial stage all the researches started out from the concepts of "cut development" and "local land invasion" of the Northern peoples under formational approach; ideas which could decrease the difference in socio-economic development of central and northern parts of the country were needful. "Retardation" was planned to liquidate by modernization of the ISPN traditional living conditions, and at the same time trying to preserve their traditional culture. At the same time the main socio-economic task was announced as finishing of conversion of nomadic population to sedentary life. It was suggested to include all social and national specialties of northern ethnos. Populations of the North are watched as a common social object and as a subject of community development, which must be investigated wholistically and of which interdisciplinarly. It was planned to pay special attention to regional component and implementation of scientific research results in life.

Plans of scientific and expedition works approved by CCRNP, included investigation of socio-economic development of Northern peoples, among other those who lived in Yakutsk ASSR. It was planned to investigate all sides of their life-sustaining activities: socio-economic, professional, cultural, linguistic, biomedical and medico-social processes, which proceed in conditions of industrial exploitation. Researchers of leading scientific organizations and universities of the country, who work in different branches of science but directly are engaged in investigations of Northern peoples, were involved. All in all more than 500 researchers were involved. Program originators

[2] National archives of Saha Republic (Yakutia). F. 52. Op. 45. D. 136. L. 4.

noted insufficient supply by the skilled workers in area of social, economic and psycho-pedagogical problems [4, p. 217]. During ten years even these areas developed greatly.

A number of organizations in Yakutia also took part in this program, these were organizations, who enter the YF SD AS USSR: Institute of language, literature and history, Institute of biology, Institute of economics of complex Northern natural resources exploitation; and also Yakutsk agricultural research institute, Yakutsk tuberculosis research institute, Yakutsk state university and number of alphabetical agencies[3]. Employees of these structures were specialists in different questions connected with live-sustaining activities of ISPN: development of transport system and producing power of ISPN habitation, formation of economics and culture in conditions of industrial exploitation, organization of traditional production units and traditional culture, and they also were engaged in studying of folklore and language, health and nutrition.

In those investigations scientists more and more often began to practice by collection of empiric material sociologic methods (questionnaires and interviewing) and medical supervision. These methods asked for direct contact with subject of research. By that fact population felt attraction to themselves and their problems. For example, economics department of YF SD AS USSR together with department of Northern ethic groups of YASSR Council of Ministers only in 1981 provided socio-economic investigations, which embraced habitation points of Northern peoples: Aldanski, Allayhovski, Bulunski, Verhnekolymski, Verhoyanski, Momski, Tomponski, Olekminski, Olenekski, Oimyanski, Srednekolimski and Zhiganski regions. Common investigated population size composed 23257 people[4].

In summary plan of the investigation by the year 1987 a topic was included: “Economic and social development of the Northern peoples in conditions of science-technical progress. Preparing of a program of scientific and production experiment on the base of sovkhoz “Tomponski” YASSR”[5]. After collecting of a statistic information, supervision and interrogation of ethnic groups by IHP&P SD RAS it was created a program of an experiment, which idea was “on the base of strength cooperation of different sciences’ representatives and integration of science and practice to provide on example of concrete farm unit the development of a concept and main directions of economics and culture of Northern peoples and to bring them to life”[6]. As a result of this experiment realization it was planned to create a really active model of farm unit, which will comprise

[3] Lensk basin water management board and Lensk united inland navigation company
[4] National archives of Saha Republic (Yakutia). F. 52. Op. 45. D.133. D. 15.
[5] CCRNP took part in creation of programs of kolkhoz “Arctic”, union “Yakutribprom” and others development.
[6] National archives of Saha Republic (Yakutia). F. 52. Op. 45. D. 136. L. 41.

complex decision of problem of Northern peoples development, affecting all sides of life-sustaining activities. Then it was supposed to extend this model on all the farm units, which are involved in traditional activities according to specialties of each of them. During the experiment, state of things in farm units, their developments based on scientific recommendations were provided by YASSR Council of Ministers. Also regional governments took active part in the experiment. For example, Tomponski district executive committee and executive committee of Tomponski local council. CCRNP not only controlled and coordinated the experimental procedure, provided connections with government of YASSR and RSFSR, but also on the base of achieved results it put forward concrete suggestions for overviewing to governmental authorities. As a result of an experiment a structure model of complex farm units was created, which included: main fields (deer farming, hunting, fur-farming, fishing), subsidiary fields (dairy cattle husbandry, poultry breeding, horse breeding, pig breeding, vegeculture), subsidiary industrial production (meat, fish, milk processing departments; fabrication of leather and fur clothes, shoes; production of household articles, of souvenirs) and objects of production and social infrastructure [5, p.7].

Socio-economical indexes of sovkhoz “Tomponski” and the whole Tomponski region during the experiment increased[7]. For many times sovkhoz became the winner of all-union and all-Russian socialistic competitions and won red challenge banners of the CPSU Central Committee, Supreme Soviet, USSR Council of Ministers and others. By the decree of USSR Supreme Soviet Presidium sovkhoz “Tomponski” was awarded with a medal of national cohesion. A contribution was made by the director of sovkhoz Vasily Mikhailovich Kladkin, who leaded this farm for more than 40 years. His idiocracies were ambitiousness, patience in end of purpose and also moral virtues. His was always ready to help; he was interested in workers’ problems, school education, and questions of children and youth sport, development of ethnic culture of evens. For all his merits he acquainted a distinguished status of Hero of socialist labor [6, pp. 228-230].

Yakutsk scientists noticed some disadvantages in the concept of a program “Ethnic population of the North”. Challenges of preserving of national identity of Northern peoples main components and providing of the whole ethnic development weren’t set. In their turn, AS USSR Institute of ethnography outworked a concept “Ethnocultural development of Northern peoples in conditions of science-technical progress for a perspective up to the year 2020”, the main attention was paid to development of preservation ways and development of traditional farm units’ fields and culture of Northern ethnic groups. A direct correlation between culture preserve and preserve of

[7] Indigoes peoples of the North SR (Y). Information packet. Yakutsk: ISIPN SD RAS, 1994.

traditional farm units' fields was pointed. In scientific works between YSC researches there was an idea that and this concept is thin-skinned because of aspiration to save traditional basis of national culture one-sidedly. Researchers considered that the process of industrial development has cardinally changed the social and ecological environments of Northern peoples' habitation and it was essential to search the definitive way of their development in the matter of fact[8].

One of achievements in the soviet national policy is considered to be formation of national scientific brain power, which representatives later not only created written language basis of their peoples, created methodological and imaginative literature on their languages, provided researches on scientific and social problems of the North, but also took part in social and political life. 1987 in scientific and higher educational establishments of Yakutia worked for about 20 representatives of Northern peoples, 12 of which were PhDs and one DSc [7, p. 172].

Scientific researches become the basis of a dialogue between government and ISPN, one of their interaction forms and scientific conferences become the ground for that dialogue. Problems of ISPN and ways of their decision are proposed by scientists. For example, a question of "northern languages" spellings and alphabet improvement. This process began from the evens language, when scientific community could pay attention of government to this problem, develop new rules and even apply them in education programs[9].

Conclusion

In such a way, in the 80s of the 20th century we can watch the increasing interest of the government to Northern peoples and territories of their habitation. After adoption of the CPSU Central Committee and USSR Cabinet enactment from the 7th of February 1980 № 115 "Of acts on future economic and social development of Northern peoples habitation" the scientific interest in northern peoples has increased, work on these ethnics has begun to be provided at a quickened pace, also because of enlargement of funding. A program "Northern peoples" was created, and its scientific directions received future development. With intensification of social methods' usage, "science" became nearer to problems of ISPN, and, in point of fact, began to play the role of intermediary between state and society.

[8] Account of SIW "Character and trends of socio-cultural and linguistic processes of development of Yakutia northern peoples at the present stage of humanistic concept (ground of Northern peoples development)" // Archive YSC SD RAS. F. 5. Op. 15. D. 116. pp. 8-9.

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THE UKHTA EXPEDITION OF THE OGPU: THE START OF INDUSTRIAL EXPLORATION OF MINERAL RESOURCES OF THE PECHORA REGION

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Abstract. The reasons of sending special expedition of the OGPU in 1929 to the Ukhta-river are analyzed. The main factor of sending the expedition was the reform of the penitentiary system of the USSR and transition to use of compulsory labor of prisoners.

Keywords: *Pechora region, Ukhta expedition of the OGPU, colonization of the North, industrial development of the North*

Introduction

21st of August 1929 – day of arrival to the river Ukhta of expedition of the OGPU is rightly considered to be the starting milestone in the practice of large-scale practical reclamation of natural resources of a vast Pechora region. Many works of scientists and regional ethnographers [1, 2, 3, 4, 5, 6, 7, 8] were devoted to the history of expedition (1929-1931), its activity and results of scientific-investigation and industrial works, which later led to creation of oil-and-gas, coal, radium and helium industrial fields and also to appearing of new inhabited localities and traffic lines in Komi ASSR.

The direction of the OGPU expedition in the region of Ukhta in 1929 is usually connected with following reasons: 1) Pechora region was rich in different natural resources which had to be included in industrial development; 2) beginning of industrialization in the USSR gave the birth to exploitation in Komi ASSR; 3) with foundation of Komi Autonomous area in the year 1921 it a question was risen of economic base of this autonomous area and its industrialization; 4) according to the decree of VTsIK of 14th January 1929 a Northern region was founded which was consisted of Arkhangelskaya, Vologodskaya, Severo-Dvinskaya provinces and Komi Autonomous Area – a great territory which demanded the exploitation of its natural resources; 5) creation and development of Gulag system influenced the industrial development of the Pechora region.

From the current point of view when results of activity and expedition, and founded on this base Ukhta-Pechora trust, are well-known, these reasons are considered to be rather convincing. But these reasons are not so evident to be the basis for sending the expedition to the Ukhta river

in 1929, by analyzing circumstances from the point of view of those days, which preceded sending of expedition.

Coal problem in Pechora region

Beginning from the year 1921 teams of the Northern science-trading expedition, founded by the decision of Supreme Council of National Economy (SCNE), undertook the task-oriented search of high quality coals in Pechora region. Results of this work let A.A.Chernov in the year 1924 to formulate a conclusion of presence of great Pechora coal basin [9, 10].

Pic. 1. Alexander Alaksandrovich Chernov, 1929

Leading economic bodies of the Soviet Union very seriously take A.A.Chernov's scientific foresight. It was an important conclusion, because according to the data of SCNE Central Geological-Exploration Control in the beginning of 1930s the common demand in coal by the European North of Russia constituted 43-45 mln. puds, 1 mln. of which was taken from Donbas, and other was bought in England and in Spitsbergen [11].

But in research circles the foresight of A.A.Chernov met famous and rather explicable distrust. A scientist himself remembered: "…do you think it was easy to prove that these Pechora coals have great importance? No. I remember the first meeting when everyone smiled that there were Perm coals in the Urals. There are no. There is salt, gypsum and so on. At my suit a special meeting of coalers was called, moreover, one very honorable specialist directly announced: "what we had to do, some Perm coals, which has no perspective" [12, c.260].

By that, A.A.Chernov himself saw just limited use of founded in 1920s coals on the territory of Pechora region. "When there were no coals of higher quality, than those, known nowadays…, *their use was posed in rather limited frames* (emphasis added). Coal can develop both mining and other (timber) regional industries. A well-known part of coal can probably withstand the short transportation; moreover, some minefields (in river Kos' basin) are situated on river routes... All in all more wide use of coal can be foreseen by carrying on the periphery of railway road of one or another direction… Absolutely other, we can say, unusually rich perspectives are posed for use of Pechora coals in the way, when *among them there will be founded highly caking coals poor in scrape* (emphasis added). Then we will have a wide basis for development of metallurgy industry on the Northern Urals, and a great import will appear to the Middle Urals and probably to the whole north of Europe" [13, p. 10].

Just discovery of coals on the river Vorkuta in the year 1930 by G.A.Chernov, who worked on the strength of N.N.Iordansky party, let A.A.Chernov to summarize his great longstanding prospecting work, that analysis of these coals gave an overriding result on both their quality and homogeneity. Discovery of Vorkuta coals changed attitude of scientists and state government to Pechora coal basin cardinally. “Keen breakdown was felt under foot from 1930 when Vorkuta region with its coals of high quality were founded. Since those times, properly, we didn’t have to defend the importance of a basin” [14, pp. 51-52]. At once after finding of coking coals on the river Vorkuta and run of A-tests, a number of meetings by SCNE vice-chairman V.I.Mezhlauk with participation of A.A.Chernov according to problems of industrial exploitation of Pechora basin coals were held in heavy security [15].

On the 20th of April 1931 SCNE adopted a regulation “Of development of fuel base in Northern region”, which suggested to found one bargh in the area of the river Vorkuta and two-three in the area of the river Adsva, to produce in these areas 7 thousand tones of coal. Moreover, in the area of the river Nezh it was supposed to stake exploratory surface mines and to produce here 2 thousand tones of coal. Exploitation and producing works here were entrusted to the OGPU Ukhta expedition. On the 24th of April 1931 a bureau of AUCP(b) Northern regional committee adopted a prescript “of field reconnaissance and industrial exploitation forcing of Pechora coals and oil”. On the 9th of May by the decree of OGPU Ukhta expedition chief a coal commission was founded, which adopted on its meeting a plan of exploitation of 9 thousand tones of coal in the year 1931 and developed activities of transference in the areas of rivers Adzva, Nezh and Vorkuta of needful working and propelling forces and materials of construction. A bureau of AUCP(b) Komi regional committee and Komi regional executive board presidium in May-June 1931 adopted corresponding prescript on actualization of directives of central government. On the 6th of August 1931 on the right bank of the river Vorkuta the first coal driftway was founded. In 1931 by the OGPU Ukhta expedition it was recovered 9,884 tones of coal, which was 108,9% of the planned task [10].

In such a way, by August 1929 a problem of highly qualified coals exploitation in Pechora region was still not solved and couldn’t be the reason for expansion of large-scale industrial works.

An Ukhta oil problem

First reliable information of oil presence on the river Ukhta date back to the end of XVIIth century. Attempts of F.S.Pryadunov, A.I.Nagavikov, M.S.Bazhenov, M.K.Sidorov, A.M.Galin, A.G.Hansberg, Ju.A.Voronov, A.I.Abakovski and other businessmen are famous for organizing of

systematic exploitation of oil in the Ukhta region, but they didn't succeed to create a viable enterprise [1].

An interest in Pechora region by the Soviet government was initiated from the first days of its creation. Country experienced fuel hunger. According to V.I.Lenin order a Special meeting on fuel on the 29th of November 1918 addressed to a Geological committee (Geolcom) for information of opportunity of industrial exploitation of the Ukhta oil fields. In the answer of the committee form the 19th of March 1918 it was said following: "As a result of all the efforts of clarification of the Ukhta oil region industrial significance it is possible to suggest that the region's state, in which conditions it is now, distant from populous centers and lack in communication with it, an exploitation hasn't any industrial significance" [1, p. 48].

In April 1918 a geological expedition in the Ukhta oil region was organized, which was headed by the chief of Geolcom oil section K.P.Kalizky. An expedition included a geologist A.A.Soyanov and mining engineer A.D.Volkovich. In summer the expedition explored the Ukhta and Sed' rivers, their tributaries and head of the river Vichegda. In December 1918 on the meeting of Geolcom it was listened an account of K.P.Kalitzky who gave his negative opinion about the opportunity of exploitation of the Ukhta field [1].

A fuel hunger which occupied Petrograd became the reason for sending to the Ukhta one more expedition in 1918. It was organized by the management council of Putilovsk fabric. The expedition included: mining engineer A.I.Semryagin, a mine captain A.F.Vaipolin, and a member of a manufacturing committee M.V.Burtzev. The expedition reached the Varvarjinsk field on the river Ukhata, took samples of oil and came back, making sure in impossibility of immediate oil extraction from the Ukhta field [16].

In February 1919 a geological survey department presented a project of carrying out of envistigation work in the Ukhta region. The expedition was headed by chief administrator of a Glavneft geological survey department a mining engineer A.I.Kovigin and a geologist of Geolcom A.A.stoyanov. In 1919 the expedition of two units left Petrograd and Moscow, but they couldn't reach Ukhta – the region was occupied by the whites. conducting reconnaissance of oil shales on the river Vim', it came back [1].

Pic. 2. Participants of expedition to the river Ukhta in 1919

In 1920-1930s the interest of USSR governmental structures to the Pechora region was connected with search of coal but not oil on its territory [1]. When estimating the available data about the Ukhta oil A.A.Chernov wrote in 1926: “In practical attitude with enough definiteness it is developed that both small number of oil horizons and their weak density with oil. That’s why *industrial significance of the region is still very poor* (emphasis added), moreover the whole region is situated in difficult economic conditions (underpopulation and farness of the region, lack of good communications and so on)” [17, p. 8].

Pic. 3. Academician I.M.Gubkin

It is interesting that when in 1929 the geologist N.N. Tichonovich proved the place of laying of the first borehole, spudded by the OGPU Ukhta expedition and gave the fountain of oil (in the first day – about 4 tones), he prepared the written materials which justified his point of view.

These materials, given by OGPU for inspection to academician I.M. Gubkin and professor A.A. Chernov, got a positive estimate of the first, and the negative one of the second [18]. It means that even on theoretical level views of the leading scientists of the country on the problem of the Ukhta oil were *antipodal*.

Even in April 1931, when speaking on the conference about studying of productive forces of the region, A.A. Chernov announced: “I will not talk about the Ukhta region because it is well-

known for a long time. There are many literature information, and those new data which are published in the previous year by a special expedition, which works in the Ukhta region, doesn't introduce anything new. There are new cased holes, one hole always produces oil, but nevertheless, *the Ukhta region doesn't promise us a great quantity of oil* (emphasis added). The hole, which is exploited now, produces about 2 tones of oil, but we would like to count these tones in hundreds and thousands, but not in one. Whether there are any possibilities for it in the Pechora region? *Speaking about oil we must be more careful* (emphasis added)" [15, p. 30].

Volumes of oil production in the Ukhta region in the first years of its industrial exploration were not great (in thousand tones): in 1929 — 0,005, in 1930 — 0,088, in 1931 — 0,250, in 1932 — 1,077. And the checklist of oil reserves was also limited by the first places: in 1930 Chibyusskoe minefield, in 1932 – Yagerskoye [1]. But even these achievements were result of the Ukhta expedition activity, but not the reason for its organization.

In such a way the Ukhta oil itself couldn't be the reason for immediate sending of expedition to the river Ukhta for beginning of industrial-researching works, but such task can be formulated before the heads of expedition. It is well-known, that in the report by N.N.Tichonovich, addressed to the head of the Ukhta expedition and dedicated to grounding of laying of the first borehole, there is such a phrase: "As the Ukhta expedition has a challenge *definitively to solve the problem of the Ukhta region practical loyalty*… (emphasis added)" [19, p.71]. This challenge was finally and positively solved only in 1933 [9].

Pic. 4. Academician V.I.Vernadsky

Problem of the Ukhta radium

A.S.Gumenuk gave an opinion, that the main reason for sending expedition to the river Ukhta was creation of radium production here, and development and production of oil, coal and helium were just passing challenges [2]. It is known that in the beginning of the XXth century radium became the most expensive and rare metal in the world. To the beginning of war, the need of the USSR in radium for the nearest 15-20 years was estimated in borders of 18-20 gram a year [20]. According to the data of A.E.Ferceman, the price for 1 mg. of pure radium in 1934 was 45 dollars, but in the nearest years it must be fall up to 35 dollars and estimate 70 thousands golden rubles for a gram [21].

Radioactive phenomenon of the uranium atoms was discovered in 1896 by G.Beckerel. In 1902 a couple P. and M. Curie discovered radium by the way of milling of uranium ores from Ioahimsteel. In 1903 P.Curie and L.Labord suggested an idea that warm, appearing by breakage of atoms is considered to be the unfailing source of Earth crust warming and a real source of energy for ongoing geological processes in it. This idea was supported and developed by professor of mineralogy and geology of Dublin University G.Jollie in the same year.

In 1910 V.I.Vernadsky addressed a meeting of the Academy of Sciences in Saint-Petersburg with the report: "Current problems in the area of radium", where he proved the *importance of systematic studying from geological and mineralogical points of view the appearance of radioactivity in nature*, which led to creation of Radium commission in the same year [22]. In 1910 V.I.Vernadsky pointed the main regions for revelation and studying of radioactive elements' fields in the Russian Empire – Fergansk region, Ural and Caucasus. In 1911-1917 expeditions of the Academy of sciences worked in Ural, but industrial fields of radioactive elements haven't been found [4].

In 1918 a SCNE radium commission by Glavhim (head L.Ya.Karpov, representatives were V.G.Hlopin, I.Ya.Bashilov, VV.I.Glebova) was founded, which were actively cooperating with A.E.Ferceman.

In March 1918 in the Academy of sciences under chairman of N.S.Kurnakov took place a meeting on radium researches, where were A.P.Karpinsky, L.S.Kolovrat-Chirvinski, V.G.Hlopin and others. During this meeting A.E.Ferceman announced that SCNE suggested the Academy to organize a factory for radium extraction from raw materials, sequestered from "Fergansk Corporation for exploitation of rare metals". A.E.Ferceman was charged to create a standing radium commission by CNPF (Commission for natural productive forces of the Academy of sciences). In such a way the first (special) department on rare elements and radioactive materials was created, the head of which was appointed V.I.Vernadsky, and his deputy – A.E.Ferceman. On the 16th of April S.F.Oldenburg and A.E.Ferceman announced department of SCNE chemical industry on material consent of CNPF to tae upon themselves organization of a factory in Perm province on the base of Bereznikovsky alkali-works and laboratory for extraction of radium from sequestrated materials. In May 1918 the First department of CNPF asked Council of People's Commisars to take measures immediately to evacuate radioactive raw materials from Petrograd to Perm province and obtained the agreement of it [21].

Attempt to organize the pilot radium factory in Perm region in the village Berezniki on the river Kama was made in 1918. But difficulties of Civil war disturbed it. The director of the factory was L.N.Bogoyavlinsky [23].

The soviet radium industry began in the beginning of May 1920 in the village Bunduga (now Mendeleevsk, Tatarstan) on the most leading of those times chemical factory, which began its history from 1868. As the director of the factory I.Ya.Bashilov was appointed. There on barges through the Volga river from Turkmenistan the uranium ore was delivered.

The only deliver of ore in those days was Tuya-Muyunsky uranium-vanadium mine, which was situated in the northern forelands of the Altay Mountain range 35 km to the south-west from the town Osh (now the territory of Kyrgyzstan). Uranium in these mines was discovered in 1900. From 1907 to 1913 the minefield was exploitated by private «Fergansk corporation for exploitation of rare metals», which had its testing recycling factory in Petersburg. During this period it was recovered 820 tones of ore, 655 tones of which were taken to Petersburg and recycled in uranium and vanadium, which was exported in Germany because it didn't find its sales in Russia. In 1914 a Moscow radium expedition worked on the ore, which included A.A.Chernov. After the revolution ore reserves, prepared for exploitation by the existing production, were estimated in the volume of 5 thousand tones and the ore was given for exploitation to Bondujsk factory. In 1922 foreigners began to be interested in the ore. They lodged a corresponding motion in SCNE concessional committee and got a refuse [20].

In November 1921 3 scientific-research departments were founded in Petrograd (Academy of sciences' radium laboratory, radium department in State radiological institute and radium-chemical laboratory), which obtained the production of Bondujsk factory. In 1922 these departments were united into Radium Institute under the head of academician V.I.Vernadsky (now SPA «Radium institute named after V.G.Hlopin»).

In December 1921 on the factory in Bondug by V.G.Hlopin were obtained first home made radium drags, estimeted in 10 mg of radium [Unknown Ferceman]. In 1923 there was tooled the industrial production of radium. A factory in Bondug produced radium up to the year 1925. During this period of time 192 tones of uranium ore were processed and 2,3 grams of radium produced. A production in the town of Mendeleevsk still appears - this is JSCo «Chemical factory named after L.Ya.Karpov».

In spring and autumn 1925 A.E.Ferceman was on expeditions on the mine Tuya-Myun in Turkmenia. In September 1925 A.E.Ferceman and A.N.Labuntsov got acquainted with uranium ores in Karelia, having found there rich in uranium compounds [21].

In April 1925 the First All-Union meeting on rare elements was called [21]. Since 1927 an exploitation of ore from Taboshar mining field in Tajikistan began, for which I.Ya.Bashilov developed original methods of radium releasing. In the middle of 1930s a training radium factory was founded there.

In summer 1926 by a chemist A.A.Cherepinnikov and science-technical member M.N.Vorobyov, parties of Geological committee expedition, which worked on the territory of the Ukhta region, was founded a high-level radioactivity of water from the hole № 1 «Kazennaya», drilled in 1912 r. Metrics, done by L.N.Bogoyavlinsky and A.A.Cherepinnikov in 1927 in Institute of applied geophysics radiometric subdivision, showed unusually high containing of radium in waters of this hole — 7,6 × 10^{-9} g/l. Radium bloomed out metamorphic blacks of the middle Timan by groundwaters, which had high content of barium chloride [20, 24].

Head of the OGPU Ukhta expedition and then Ukhta-Pechora trust Ya.M.Moroz later proved the importance of the Ukhta radium discovery in such a way: «Attention which the hole «Kazannaya» payed, is explained in the way that the hole gave a fountain of this water 60 qm a day, and this means that the hole threw across the surface 0,2 gram of radium, that means that from 1913 to 1929 it threw not less than 2,5 grams of radium. The importance of the last number will become evident when saying that for 30 years from discovery of radium, from 1899 till 1929 in all the countries it was mined less than 600 gram»[1].

Making an assumption of the «radium reason» for direction of the OGPU Ukhta expedition in 1929, his supporters implied the impact of the future Ukhta water field in the Atom project of our country. But at the end of 1920s and beginning of 1930s the opportunity of atomic weapons creation was just hypothetic. And the atomic bomb itself as the way of nuclear explosive doesn't contain radium but enriched plutonium.

On the 31st of March 1934 academician A.E.Ferceman sent to D.I.Sherbakov, a specialist in the field of geology and geochemistry of radioactive natural resources, member of Geochemical institute named after M.V.Lomonosov (later AS USSR institute of geochemistry, mineralogy and petrography) from Karlovy Vary a letter on results of radium (uranium) mines inspection situated in Ioahimov near Karlsbad. A scientist in his letter pointed out directions of radioactive materials usage, which existed in the world industry in those years: uranium for production of paints for glass and china industries; ferrouranium for metallurgy (bought by factories of Crupp and Japan); radiography of metals; luminous paints; water and bath cure from radioactive sources; study of

[1] State agency og the Komi Republic «National archive of the Komi Republic», fond P-1, op. 3, d. 460, l. 22-23.

influence of radiation on organism of a person [21]. Announcing on the XVIIth International geological congress in 1937, Moscow, V.I.Vernadskiy again underlined the importance of studying of natural radioactivity with the aim of obtaining of common international sample of geological time [22].

In such a way in those times there was no question in atomic energy usage. Before 1943 there were no practical works in the USSR in the area of atomic weapons creation. Even before the Great Patriotic War group of nuclear physicists of the Kharkov Institute of physic-technical researches suggested to start works on creation of extra-power explosive device, but didn't find support in neither Defense people's commissariat nor in State commission on military and industrial researches. In those times it was considered that creation of such a weapon was possible only theoretically, but unlikely to realize on practice in the nearest future. That's why attention was concentrated on following foreign publications on atomic problem. In May 1942 Stalin received a letter from the future academician G.N.Flerov, who payed attention on the lack of opened publications on uranium problem since 1940, what could mean the beginning of works in the West upon atomic weapons. That fact together with the data of Intelligence service led to the moment when on the 11th of February 1943 Stalin signed the USSR Government decree about the organization of projects on usage of atomic energy in military goals [25, 26]. On the 1st of December 1945 a decision on founding of Plutonium plant was concluded.

When estimating the role of the Ukhta radium production in the village Vodny in the history of our country we must take into account that before 1940s radium was the only source of nuclear radiation. Just this element played the most important role in formation of Russian atomic science and technic. With its help fundamental basement of radiochemistry and physics of the atomic core were put; it became the instrument for development of the first technology of extraction of plutonium from radioactive uranium, which provided the industrial derivation of plutonium for creation of atomic bomb. Consequently, the Ukhta radium was necessary for leading scientists of the country for decision of theoretical challenges, but could not be the main reason for practical interest of USSR government in the Pechora region resources.

Challenges of the USSR industrialization

The XVIth AUCP (b) conference, which took place on the 18-31st of December 1925, gave a guideline «to keep the direction on industrialization of the country»[2]. A United plenum CC and

[2] AUCP (b) in resolutions and decisions of meetings, conferences and plenums CC. Part II. 1925-1939. M.: OGIZ, 1940. P. 49.

AUCP CSC, which took place on 21-23rd of October 1927, when speaking about the directions of the five-year plan of national economy, noticed: «In the area of new productions there must be developed and put again:…exploitation of radium (emphasis added)»[3]. The XVth AUCP (b) conference in December 1927 charged the CC of the party to continue with unremitting speed the politics of socialistic industrialization and approved the intention of innovational development of the country: «In the field of new productions must be developed or put again:…exploitation of radium»[4].

The XVIth conference AUCP (b) which took place on 23-29th of April 1929 without a dissenting vote adopted a resolution «Of a five-year plan of national economy development». There was said nothing of oil and radium, and speaking about coal it was planned to provide more than the double growth of its exploitation during a five-year period at the cost of great mine construction on Donbas, Urals, Kuzbas, and Moscow lignite basin. There is nothing about the Pechora and Komi Autonomous Area. Later according the Urals there is an explanation: «Industrialization of the country can't be supported only by the Southern coal field. A life-sustainable condition for fast industrialization of the country is considered to be the creation of the second main coal-metal centre of the USSR by the way of usage of rich coal and resources fields of the Urals and Siberia»[5]. Taken place on the 10-17th of November 1929 CC AUCP (b) conference demands to take all possible measures upon increase of production against the appointed plan, particularly - in the area of ore and coal-gas carbon.

In such a way, in the plans of the USSR industrialization in the years of a first five-year plan it was said nothing of the Pechora region exploitation, unlike Donbas, Kuzbas and other areas. A challenge was put to organize the exploitation of radium without specification of this exploitation's region.

Komi governments' attempts in development of economic potential of the region in 1920s.

Founded by the decree of ARCEC director in 1921 Komi Autonomous Area got an ineligible economic inheritance, among which there were 3 used-to-be ore mining and smelting factories and one saltworks. Taken place in August of the same year first regional conference of miners and metalworkers faced the following problem: «The conference faced the question head-on: to be or not to be for metallurgy factories in the region, which during the revolution and the civil war

[3] The same. P. 200-201.
[4] The same. P. 225, 239.
[5] The same. P. 325, 417.

substantially decreased its production and caused damages for the state. They didn't have working capital as all the products of 1920th year without payment were exported by Severodvinsk gubsovnarhoz» [27, p.5]. Agriculture in those times gave 94% of all the production of the region's people's economy [28].

It is well-known that during 1920s governments of Komi AA for many times applied different central organs of the USSR for sending to the territory of the Pechora region geological prospecting expeditions for deep and complex investigation of its resources[9, 6, 24].

Even in April 1921 by the first head of Zyryansk (Komi) representative by Narkomnats D.A.Batiev it was laid on an idea of the Ukhta resources development by the powers of prisoners. He proposed to organize a great concentration camp on the river Ukhta and to send there prisoners from the whole Russia. Though the proposal wasn't confirmed by any calculation, nevertheless, CC RCP (b) Politburo which took place on the 20th of April 1921 adopted a special decision on organization on the Ukhta river of such a camp for 10-20 thousand people, which wasn't realized [29].

Pic. 5. Dmitri Alexandrovich Batiev

Active position of the Komi government influenced both providing of geological investigation of the Pechora region territory, and supporting of central governmental attention to the problem of search of the Ukhta oil and the Pechora coal.

Evident success in industrialization of the region also took place. For example, in 1932 unit weight of industrial production in economics of Komi was 63,5%, and by the year 1936 r. it attained 71,2%. Though, the leading industrial branch in Komi ASSR belonged in 1930s to timber harvesting (more than 84%) [30].

Beginning of GULAG

Here is an opinion that one of the incitements of the beginning of investigation of the Pechora region was reformation of the system of Soviet corrective labour institutions in the end of 1920s. Government didn't cope with expenses on prisoner welfare, which number was about 200 thousand people. This situation was stated by the Soviet government on the 26th of March 1928 on the issue of People's Commissar for Justice [1, 7]. In 1928 People's Commissar for Justice N.M.Janson proposed to use the labor of prisoners for heavy increase of timber export by the war

of creation of timber camps on the north of the european part of the USSR, but this project was temporarily «frozen» [31].

Soviet of People's Commissars and ARCEC in February 1929 proposed the OGPU as a single action to isolate in concentration camps for about 8 thousand people: thieves, habitual criminals, criminals, horse-stealers and others. On the 13th of April 1929 to the Russian SFSR Soviet of People's Commissars a staff report by people's commissariats of justice, domestic affairs and OGPU was sent, where it was proved the necessity of passing from the current system of penal institutions to the system of concentration camps, organized by the type of OGPU, where it was proposed to send all the prisoners, which were convicted and sentenced to 3 years and more, for colonization of northern areas and development of natural resources. It was supposed to let the OGPU to organize concentration camps in the regions of Olonz (Karelia) and Ukhta with the common capacity of 30 thousand people. By that fact, it must be the reduction in expenses for prisoner welfare from 250 rubles a year to 100 rubles a year [7].

On the 13th of May 1929 a decision of CC RCP (b) Politburo approved the adoption of a system of common usage for compensation of prison labor, who were convicted and sentenced to not less than 3 years, in the regions of Ukhta, Indigi and others. It was created a commission for appreciating of prison labor use conditions. Parties of the commission were Russian SFSR people's commissar for justice N.M.Yanson (commission chairman), vice-chairman of OGPU G.G.Yagoda, Russian SFSR counsellor N.V.Krilenko, Russian SFSR people's commissar for domestic affairs V.N.Tolmachev and USSR people's commissar for labor N.A.Uglanov [31, 7].

On the 15th of May 1929 the first session of the committee took place, where were invited OGPU and NKVD panel member G.I.Boykiy, special agent by OGPU panel membership Feldman and representative of Russian SFSR prosecutor's office Traskovich. A wide range of thoughts took place, which were sometimes absolutely different. N.M.Yanson again payed attention on timber development on the North, which can be decided by the colonization of prisoners. G.G.Yagoda boosted creation of northern camps: «Working and getting all the minimum needful depending on intensity of labor, by the end of the 3-year vacation, prisoners will get some hundreds rubles, with which they will have an opportunity, when exiting the prison, to organize their village household or wait for job in a town. With the number of measures of both administrative and household assistance, we can induce them to stay on the North, here colonizing its remote areas» [31, c. 145]. Later, in 1930 G.G.Yagoda in more detail unpacked the idea of North exploitation by prisoners: «Question on camps must be changed on another orientation. Now camp is considered to be just crowd of prisoners, whose labor we use nowadays, when giving no perspective for both

a prisoner and us… We must change camps into colonized villages, when not waiting for expiration of sentence…The whole idea of giving us prisoners - is abolishment of prisons…We must as soon as possible colonize the North (emphasis added) [31, p. 155]. On the meeting N.A.Uglanov gave an opinion that concentration camps must be meant for hopeless habitual criminals. Moreover, organization of camps for 10 or more thousand people he considered to be ball-breaker. V.N.Tolmachev considered organization of the camp on the Ukhta to be impossible, because it was difficult to drive a road there and OGPU would not cope with difficult household challenges on organization of such a camp. He expressed an apprehension that creation of such camps would cause political backwashes - in the branch of white emigration and in bourgeois states there would begin talkies about chekists' confines. N.V. Krilenko, conversely, saw no reasons to postpone creation of camps. G.I.Boikyi announced that OGPU was ready to undertake building of already designed highway to the Ukhta, and also railway Kotlas - Ust'-Sisolsk. He said: «People's Commissariat for Lines of Communications can't do it in supposed time, as it could not find workers, but we will cope with it. A person, who crossed over through Solovki, is a stamp in the idea of labor attainments, because we arrange fixed assignments and ask for their strict accomplishment, when taking into account beforehand possibilities and capabilities of prisoners» [31, p. 146]. As a result of interchange of views it was resolved to charge OGPU to begin organization of concentration camp in the region of Ukhta and to ask for funding 1,200,000 rubles this year [31].

A 17th of May 1929 commission sent a memorandum to I.V.Stalin, in which it demanded to charge OGPU to start organization of concentration camp in the Ukhta region. This suggestion was confirmed by the CC AUCP (b) Politburo from the 23rd of May 1929 [31, 7]. One more meeting took place on the 13th of June, where N.M.Yanson formulated the main idea of camp organization: «From the point of household view, camps must become pioneers of new regions' settlement by the way of cheap prisoners labor use (emphasis added). That's why questions of technical equipment are secondary; the aim of camps - to clean the way to uncrowded districts, investigation of areas, beginning of natural resources exploitation. When these areas will be in the way of exploitation interesting, they will be given to production bodies (emphasis added), and camps will be replaced to new areas with the same aims of collaboration» [31, p. 151].

On the 27th of June 1929 a regulation of CC AUCP (b) was issued, in one of which sentences it was asked OGPU to organize on the Ukhta territory a new concentration camp in the aim of the region's colonization and exploitation of natural resources by mean of prisoners' labor use. This regulation was repeated by the Soviet People's commissariat form the 11th of July 1929

[31, 7]. In such a way, sanction for organization of the Ukhta concentration camp was given from the Soviet state's top leadership. But what was the reason for choosing the Ukhta region is not known according to the documents.

Role of A.A.Chernov and N.N.Tichonovich in organization of the Ukhta expedition

There are some facts in literature, that on the 9th of January 1929 «A.A.Chernov and A.F.Lebedev announced a report of Pechora coals and oil in government» [6, p. 111], which became the foundation for appearing of keen interest of USSR leaders to Pechora region in common and to the Ukhta region in particular. In one of researches it is noticed: «Even on the 9th of January 1929 A.A.Chernov and A.F.Lebedev made a report by the OGPU panel member Bokia on Pechora basin coals and oil. As a result of their reports in spring of the same year a special expedition to the Ukhta river was sent, which got down to work at coal and oil» [32, p.13]. Though, such facts are given without any source references. A.A.Chernov himself never took a credit for organization and direction of the expedition to the river Ukhta.

According to the data of the Komi Republic National archives, on the 26th of June 1929 A.A.Chernov made a report on geological researches of the Pechora region on Komi Autonomous area executive committee enlarged meeting. Resuming many years of pioneering in Pechora region, the scientist noticed: «Anyway, here are colossal coal resources, but limitation of fundings given by Geological committee, didn't let to spread research works at a larger scale» [10, p. 30]. Later in minutes of the session it was noticed: «Approximate numbers of geologist Lebedev on use of Pechora coal for need of transport (river, sea and railway) attracted great attention of Geological committee and other central organizations for the further investigation of the Pechora region in order to define quality of coals. Chief mountain-fuel administration took his point of view about production of deep-hole prospecting next year, for which it appointed the necessity of fund allocation of 2 000 000 rubles. Such a hastiness Chertov doesn't approve (emphasis added), because Pechora coals ask for serious investigation especially in quality, to define an opportunity of coal use in this or that branch of national economy» [10, p. 30 - 31].

Even in April 1931 when speaking at the Second conference on production forces study of the Northern region in Arkhangelsk, A.A.Chernov announced: «…nowadays the Pechora coal is put for exploitation summarily, though we - scientific and practical figures - would like this action to postpone a little (emphasis added), because it could lead us into trouble. We have no fields, prepared for exploitation, but the position is following - to recover right now. Those engineers (I don't belong to them, but I was with them on SCNE meetings), who were engaged with

investigation of Pechora coals, as for example, engineer Matveev and Lebedev proposed for experiential mining in 1931 different quantities: engineer Lebedev proposed to focus on 2000 tones, engineer Matveev, for safety precaution, proposed to mine 500 tones. On the SCNE meeting by Mezhlauk the assignment was increased up to 10 thousand tones with proposition to make them from three regions. As in any new and great deal, we have to take hazards. Three regions, which were noticed on the meeting at Mezhlauk, are situated on Adz'va, Nech and Vorkuta» [15, p. 27]. Though the scientist accepted decisions of governmental bodies as guidelines for action, which is impossible to argue: «…temps of our building demand it. They dictate us speed-up of both investigation and exploitation, and on this question we have an instruction (emphasis added) to enter upon the path of coal exploitation» [15, p. 16].

On the 26th of June 1929 A.A.Chernov gave a report on the meeting of different organizations' representatives in Komi Regional Executive Committee, where he announced that «presence of great reserves of oil on Ukhta in the investigated region, where oil cropped on the earth, was doubtful» [19, p. 63].

The head of the OGPU Ukhta expedition geological service, and later Ukhtpechlag and Ukhta-Pechore trust, N.N.Tihonovich (pic.6), when being Director's Assistant of the Geological committee, was arrested on the 18th of November 1928 on the charge of espionage activities and economic counterrevolution, and was jailed into Butyrskaya prison. He was accused in performance of beforehand artificially low reserves of oil in Grozninsky region, sending of reconnaissance in those regions, where was no oil, communication support with ex oil owners and espionage activities [18]. A scientist was sentenced to supreme measure of punishment, which was changed into 10 years of labor camps. Later he remembered circumstances of the Ukhta expedition preparing: «Collusion began in investigating authority. I was asked a question: «What is Ukhta?» There is negative literature about Ukhta (emphasis added), I didn't follow it during last years. I used to be there (in 1900 and 1901 - author), but what was there during latest years? There were some holes. «Give me material, - I answered, — and I will tell». The material was given. I looked it through, wrote a report and expressed a position, that because the theory of Chernishov was rejected, it was considered to be so important factor, that there was a purpose to overview them. Oil was

Pic. 6. Nikolay Nikolaevich Tichonovich

founded too far away (it is intended boreholes of Russian association «Neft'», scudded 1914-1916 in the region of the Chib'ya river, left influx of the Ukhta River — author), according to the theory of Chernishov there could be no oil - it must have been verified. I plan expedition with about 100 people, a number of geographers, topographers, drilling rig is light. To inspect, and later we will see, what will be (emphasis added).

A conversation took place in April (1929 - author). I was invited to the meeting of unknown for me people, eight persons. I was brought the issue to a head: how to go to Ukhta? What things to take with? What equipment, how much food and so on? I wrote them the route and about equipment. I wrote that they should take there everything - up to the last nail. I pointed them 2 ways: old way and northern way - there more difficult cargoes can be carried and it was difficult to carry them through Izhma. Being 195 people we constructed the expedition. I didn't pick up to select drillpipes. From my investigator I heard that there were great fundings in the Ukhta and I went there. I got cold feet. This region I considered to be practically hopeless (emphasis added)» [33, 7].

According to other data, N.N.Tichonovich from the USSR CEC party S.V.Kosior it was firstly offered a choice: camp in Kazakstan or in Ukhta. But the answer was practically determined without regard to opinion of a scientist for Ukhta [33]. Even coming to Ukhta and preparing a memorandum to the head of the Ukhta expedition about the place of laying of a borehole on the 23rd of November 1929, N.N.Tichonovich noticed: «…a practical loyalty of the region is still not determined (emphasis added), even for some its part» [19, p. 71]. In such a way, opinion of N.N.Tichonovich, evidently, played the decisive role in the choice of expedition arrival place - to the Ukhta river. Though the scientist himself considered this region to be of little promise for organization of urgent oil production, but needed in geopolitical investigation and follow-up of sinking results. A.A.Chernov was for a careful approach and didn't rush things, but he thought that it was senseless to protest against fast industrial exploitation of the Pechora region.

A brief history of the OGPU Ukhta expedition (1929-1931)

Organization of expedition was charged to Administration of Northern camps of special operations (ANORCSP) in town Kem'. In May 1929 in the Solovetsky camp there were sent an ex-officer of Security of Smolny and Kremlin E.P.Skaya (he became the head of expedition konvoy) and S.F.Sidorov, who was charged as the head of expedition, for selection in transit camp in Kem' for future participants of expedition.

On the 5th of July 1929 139 people and equipment was carried on board the ship «Gleb Bokiy» which at dawn of the next day unberthed the Kem'. On the 8th of July in Arkhangelsk people, food and equipment were overcharged to the ice ship «Umba», which on the 9th of July was put out to a sea. On the 13th of July they arrived to outlet of the river Pechora, to the place of future Naryan Mar. Overcharged from barge, expedition continued its way up the river to the village Shel'yaur, than down the river Izhma, leading boats on binder twines. Expedition was divided into «devisions». Each «devision» carried with binder twines one boat, full of equipment and food. On the 19th of August they arrived to the village Ust'-Ukhta. To the place of destination on the 21st of August came 125 people: part of prisoners ran away during the road, some freelances were dsmissed, and geologist M.P.Lipovsky was killed by the runaway prisoner.

Pic. 7. Yakov Moiseevich Moroz

On the 13th of October N.N.Tichonovich arrived to Ukhta, and on the 30th of October - the second detachment, headed by Y.M.Moroz. On the 2nd of November 1929 he became the chief of the Ukhta expedition [34]. Even in 1929 from the previous boreholes there were produced 5 tones of oil. In April 1930 a new borehole № 5 was spudded from depth 338,7 m oil began to flow. Cheb'usskoye field of high-gravity oil was discovered in such a way and gave birth to development of oil production in Komi. In 1930 there were produced 88 tones of oil, in 1931 - 250 tones, in 1932 - 1070 tones. In the year 1938 Central commission on reserves gave sanction to field reserves at a rate of 1,6 mln. tones. During the whole period of exploitation up to the year 1957 there were produced 560 thousand tones of oil.

In April 1931 a number of meetings of special commission, organized under Soviet of Labor and Defence and headed by USSR SCNE deputy chairman V.I.Mezhlauk took place. In meetings representatives of OGPU, Soyuzneft, Chief geological investigation administration, Arkhangelsk and Komi Autonomous area People's commissariat of Water Transport and others took part. Results of the OGPU Ukhta expedition were approved [34]. On the 6th of June 1931 the Ukhta expedition was changed into Ukhto-Pechora labor camp [19]. On the 16th of November 1932 by the decree of Soviet of Labor and Defence on the base of camp an Ukhta-Pechora trust was created [7].

Conclusion

So, by the end of the 1920s there were no visible reasons for immediate implication of number of Pechora region natural resources (coal, oil, radium): they were underexplored, needed

extra investigations and were situated in such faraway and unprovided with traffic ways regions, that scientists and specialists didn't challenge to explore them foremost. Exploitation of the Ukhta oil and Pechora coals were situated in the phase of search, and the Ukhta radium was a subject of though current but scientific not practical (for example, military) interest.

The main reason for OGPU expedition send in 1929 to the Ukhta river was implication of USSR central governmental bodies order to create a new big concentration camp in this region. Decision on creation of such a camp was done as a result of discussion of the creation facility system modernization variants and of making a decision to use labor of prisoners for colonization of the USSR northern regions and exploitation of natural resources of these regions. Except that, the colonization itself was a priority task in comparison with challenges on creation of enterprises used for exploitation of natural resources.

Probably choice of Ukhta as the first point for organization of a camp and sending of OGPU expedition there was done under the influence of authoritative statement of N.N.Tichonovich about the possibility of the Ukhta region oil regions' reconsideration. Maybe the opinion of OGPU highest-ranked executive G.G.Bokia, who studied in the Gorny institute and was ready to estimate conclusions of N.N.Tichonovich, also played its role.

Maybe one of causes for sending of expedition to the region of Ukhta was the following factor. In April 1929 from the borehole near Chusovsk Towns (Perm region), spudded for exploitation of potassium salt, an oil fountain unexpectedly began; it gave birth to development of Volgo-Ural oil-and-gas province and again revived attention of the USSR central establishments to the problem of the Pechora region oil bearing capacity [24, 19].

Surely in choosing Ukhta its role played such factors, influencing exploration of our country's Northern regions, as authoritarianism and specific structure of the USSR state power, which let to make the most important decisions on political and economic questions by charmed circle [35]. It is well known that many decisions on exploration of the North were «top secret». That's why it was hardly surprising when in December 1933 M.I.Kalinin from a rostrum of the ARCEC IVth session announced: «We know too little about the work, which was done on Pechora on exploitation of coal and other natural resources. Anyway, in the nearest future the problem of the Pechora exploitation will rise in all its magnitude and its results will be probably greater than we expect nowadays»[36, p. 40].

And really, a great work on exploitation of the Pechora region was undertaken, which gave its evident and great results even by that time, though it was practically not known about it. Only on the 3rd of February 1934 a chairman of the USSR State plan V.V.Kuibishev, when delivering the

report of the second five-year-plan period on the XVIIth AUCP (b), openly announced all the gathering parties: «One of the greatest problems of the Northern region, which decision will be started in the second five-year plan period, is considered to be development of coal and oil fields of the Pechora river basin, which would let provide with high-energy fuel the Northern marine fleet, industries of Murmansk and Northern regions» [10, p. 42].

Really, some even very poor data on results of works in the Pechora region were introduced in the USSR State plan reporting according to the results of the first five-year plan period. In chapter «Fuel» it was noticed: «A number of new coal fields are placed into service, including big Karaganda basin, Bukachachinsk field, Tkvarchelsk, Pechora coals, Ukrainian brown coals and a number of others»[6]. There was nothing about the Ukhta oil. Particularizing in his results on development of many national republics and regions as part of the USSR, State plan counted for necessary passingly to name Komi Autonomous area: «Great success in the sphere of household building is taken in other republics and regions of USSR - in Karelia, in Komi, in national regions and republics of Northern Caucasus, in Kara-Kalpak, Oirotia, Hakassia, Mountain Shoriya and others»[7].

One has the impression that sending of expedition to the Ukhta was a secret and for local government, with whom it was not necessary to discuss this question. A chairman of Komi Regional Executive Committee I.G.Koyushev, when reporting on the 5th of July 1929 on the kommunist and Komsomol member meeting of town Ust'-Sysolsk said: «According to the reports of professor Chernov, a big expedition is coming by the sea to Ukhta (about 150 people) for deep and wide exploitation of oil» [24, p. 35]. That means that chairman of Komi got known about the expedition from the scientist. By that fact, it is also known, that on the 26th of June 1929 A.A.Chernov made a report on geological investigations of the Pechora region in 1929 on enlarged meeting of Komi different establishments' representatives, where he announced the direction to the Pechora region of three investigation parties - to the river Izhma, in Ust'-Voya, on Small and Big Kozhva, but he said nothing of great expedition to Ukhta [19].

The following specifics of development of the North in those years also attracts attention - not large-scale, seizing great territories, but «patchy» decision of remote areas' challenges [37]. Ukhta in this meaning - is a typical example of such a decision. Next years this «patch» gave its «sparks» which fired «hearths» of Yarega, Water fields, Edzhid-Kirty and Vorkuta.

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[6] Results of performance to a first five-year plan period of the USSR national economy. L.-M.: State publishing office «Standardization and rationalization», 1933. p. 94.

[7] the same. p. 245.

Similar to Ukhta a mining and chemical trust «Apatit» was founded on the Kola peninsula. Komi ASSR and the Kola peninsula has incredible analogies by both time and precipitation of industrial centers' creation. From June to October 1929 there was a building of 27-kilometer drift way from Apatity to branch railway line Leningrad-Murmansk by the strength of prisoner population of ANORCSP, sent from Solovetsky islands. In August 1929 the first geological borehole at Apatity mountains gave core salvage with rich grade of appetites in the interval from 30 to 200 meters, which let to estimate its reserves in one billion tones. In November 1929 a true «Apatit» was created for exploitation and refinery of apatite ore [38].

Moreover, in July 1929 to the Franz-Joseph Land an expedition on icebreaker ship «G.Sedov» was sent under the heading of O.Y.Shmidt. On the Hooker Island a USSR flag-raising ceremony took place, which could mean accomplishment of the USSR CEC decree form 15th of April 1926 on joining of the archipelago to the USSR [39].

On the 17th of July 1930 an icebreaker «A.Sibiryakov» arrived in the bay Varneka (island Vaigach) with the first group of chekists and prisoners of the OGPU Vaigach expedition, headed by F.I.Eihmans. A few days later a new group of prisoners was delivered on board the icebreaker «Malygin» and ships «Gleb Bokiy» and «Myatel». In such a way works on exploitation of galenical ore on the Vaigach island began. On the 23rd of July 1930 a decree № 1 was prepared signed by F.I.Eihmans: «Based on USSR SPC decree and immediate order of Unified State Political Department to consider OGPU Vaigach expedition arrive this day and start working… As agreed with the leading bodies of OGPU I announce that all the prisoners of Vaigach expedition will use all the privileges and advantages in not only early parole, but also after release each prisoner will attain facilities and opportunities for future live with the immediate clearing of all before and latest criminal records, when they will deserve it by their labor and a great wish to keep up with labor population of the Soviet State» [40, p. 286].

On the 11th of November 1931 a regulation of CC AUCP (b) was adopted «Of Kolyma», where the following challenge was set: «For forcing of gold exploitation in upper Kolyma to create a special trust with direct subordination to CC AUCP (b)» [41, p.7]. On the 13th of November 1931 a regulation of Labor and Defense Council about organization of a State trust on road and industrial building in the region of upper Kolyma - «Dal'stroy» was adopted [10].

On the 23rd of June 1935 a decision of the USSR SPC «About building of Norilsk factory», where exploitation of nickel and building of a factory with power of 10 thousand tones of nickel a year was charged on Central Administration of Prison Camps, appeared [10].

«Focality» of the exploration of the North was the main principle of the USSR politics in 1930s. During the first conference on location of production bodies, which took place in autumn 1932, the chairman of the USSR State Plan V.I.Mezhlauk announced that state payed too much attention to decision of Northern challenges. Northern group of the USSR State Plan under the command of S.V.Slavin prepared a concept of socialistic exploration of the North, which was announced on the conference and became the leading for acceptance of executive decisions about the North in 1930s. One of the leading principle concepts was following: exploration of the North must be of a limited character because of stepping difficulties in the northern regions and increase in the cost of works here, it is important to build on the North just those enterprises which are caused by the absolute necessity and couldn't be build in other regions with more effectiveness and less expenses [42].

Dotty or «patchy» principle of the Northern exploration was stated in the speech of the Northern Sea Route Authority head O.Y.Shmidt during the All-Union meeting of Soviets in 1935: «During czarist autocracy there were no wishes for development of the Northern economy…During czarist autocracy we knew nothing of natural resources of the North. But now we know, that there are polymetallic ores; coal, enough for development of household on the North; and oil is already being spudded» [41, p. 163].

Charging the challenge of Northern investigation to OGPU, evidently, was connected with the possibility of this organization to solve difficult problems fast and effectively, including the problem of labor resources. With common, unforced methods this problem was impossible to solve. For example, A.A.Chernov in 1931 wrote: «…now when we really put not only investigation of the Pechora coal but also its exploitation, the question - where to take labor resources from - is considered for us to be highly important and rather difficult to solve. On the meeting in SCNE we had to stop on the idea to take qualified people from Donbas and Moscow-area basin, though we need them also there for exploitation of coal» [15, p. 23]. OGPU found the needful labor resources.

Northern region party leadership agreed with the methods of OGPU, which is noticed in the letter of the AUCP (b) Northern kraicom first secretary S.A.Bergavinov, sent «top-secret» and «back in 24 hours» to the secretaries of village regional committees, town committees, Nenetz regional committee and Komi regional committee in 1929: «Nowadays from deporteed kulak families there are more than one thousand on the North. These are great number of our enemies, and these enemies are finally acerbated, thus it is that mass which: can become great labor and economic factor for development of the region's production strength, and factor of political

difficulties in the region, which account could exceed the bounds of a region. Everything depends on us, on our work and attention to this greatest in the history of party political issue…Party organizations must keep firmly in eye, that this measure, except the political, is also economic advantage for both country and region, because by this way we decide the colonization challenge (emphasis added), eliminate strong deficit in labor strength and investigate new areas on the North» [8, p. 41].

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MIGRATORY PROCESSES IN THE CONDITIONS OF TRANSFORMATION OF TERRITORIAL AND SETTLEMENT STRUCTURE IN THE ARKHANGELSK REGION (1926-1989)

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Abstract. Some results of studying the question of migratory behavior of the population in the conditions of transformation of territorial and settlement structure in the Arkhangelsk region during the period between population censuses of 1926-1989 are presented in the article.

Keywords: *census, population, migration, transformation, territorial settlement structure, region*

Introduction

Вот он мой дом, деревенский заброшенный.
С грустным укором в глаза мне глядит.
Вот он стоит, снегом весь припорошенный,
Тихо оторванной ставней стучит…

Soviet period in the history of the Arkhangelsk region is characterized with different groundbreaking transformation changes in its territorial-settled structure. Restructurisation of the appeared system of population's resettlement in «living space» of the Northern region is overviewed by us as one of the leading factors which greatly influenced its migration behavior. As a result of migration movement of population in 1939-1989 a number of countries' localities decreased for 2,6 times, of villages - for 2 times, inhabited community of railway type - 2,3 times, townsites - 12,9 %. 6 new towns were founded in the region at the same moment, number of urban-type settlements increased from 7 to 42. Regulation of population migration flows became one of the leading directions of demographic policy of Soviet government. Meanwhile, this politics hasn't always taken into account migration climate of population. And as a result, an out-of-control process of population's migration movement took place. Consequences of «pressure of living space» in localities had an adverse effect on its population life-sustaining activities. Author, when using the materials of population census and data of simultaneous statistics of its particular groups, reviews in this article consequences of migration activity in the Arkhangelsk region in 1926-1989. Nenets Autonomous area was in those times a part of administrative and territorial division.

Migrants as part of population

As a common consequence of results of two connected with each other processes of territorial and settlement structure in the Arkhangelsk region and migration behavior of its population, to our mind, is considered to be materials of All-Union population census of 1989. They contain data, which characterizes population distribution (including migrants) of the Arkhangelsk region on duration of residence in permanent place of residence during the Soviet period: in gender and age, in nationality and in groups of village and town population.

Table 1

Population and migrants census in the Arkhangelsk region in groups of population, gender and age[1]

Population	All population			Migrants among them (arrived all in all)		
	Both gender	Men	Women	Both gender	Men	Women
Town and village	1569679	764006	805763	833490	391772	441718
Town	1151559	557351	594208	624182	291777	332405
Village	418120	206655	211465	209308	99995	109313

According to the data of All-Union population census of 1989 (later census 1989) there lived in the Arkhangelsk region 1569679 people, among them 833490 migrants, or 53,1% from common population, who occupied this region. When identifying population of permanent residing in town localities and in villages to the population of arrived migrants percentagewise, it looks so: among men — 48,7% and 51,3%, among women correspondingly 45,2% and 54,8%.

There were 54,2% migrants among urban population. We must also notice, that in 1989 a unit weight of migrants-men was higher than the number of permanent residing of the same gender on 2,4%, and migrants-women this index was 5,9% correspondingly. As part of countryside each second person was a migrant. A unit weight of migrants-men to permanent residing in a countryside was 48,4%, among migrants-women this index was 51,7%.

In a group of population younger than working age, migration process was rather more intensive in countryside. Each fifth rural man of this age was a migrant, as part of urban

[1] City records of the Arkhangelsk region, f.1892, op.27, d.40, pp.3-5,9-11,15-17,41,43 (author's estimation).

population this index was not higher than 15,0%. There are no sufficient differences in gender groups among countryside and urban population.

As part of urban population of working age unit weight of migrants ranged from 65,0 to 65,4%. There are no sufficient differences in gender groups. As part of countryside population in this age group this index was for women 71,0%, for men — 60,3%, for the whole group — 64,8%.

In a group of urban population older than working age migrants were 81,5%, among them migrants-men — 82,8%, migrants-women — 81,2%. In this group of countryside population each second person was a migrant. There are no sufficient differences in gender groups. At the same time let's pay attention to the percentage of urban and countryside migrants older than working age in this group. The whole group is 29,7%, migrants-men — 29,5%, migrants-women — 29,9%. We can note, that the formed correlation can help us to make a conclusion that one of the leading directions of countryside migration still were urban localities.

From 31275 migrants in the Nenets Autonomous Area 71,9% were urban population, 29,0% were countryside correspondingly. Practically the same correlation is noticed among migrants in groups younger than working age and in working age groups. A unit weight of countryside migrants older than working population was 38,4% from the whole in the Area, and of urban — 61,6%.

There are no sufficient differences in migrants-men in common group, and in groups younger than working age and working age. These indexes teeter between 71,9-64,6% among urban population and 25,4-26,4% — among countryside one. Unit weight of migrants older than working group in urban population among migrants of the group in the NAA was 58,5%, countryside migrants — 41,5%.

For migrants-women of working groups and older indexes are practically the same: urban population — 68,3-68,5%, countryside population — 31,5-31,7%. At the same time in the group younger than working age in urban population this index was 73,8%, in countryside population — 26,2%.

Characteristics of migrants in gender and age

Let's analyze the results of population census of 1989, which characterize the unit weight of all arrived migrants of all nationalities and ages in urban and countryside, urban, countryside population of Arkhangelsk region according to three groups (both gender, men, women). As a whole they are represented in table 2.

Table 2

Allocation of migrants in gender and age in the Arkhangelsk region

	Urban and countryside population			*Urban population*			*Countryside population*		
	Unit weight of arrived, in %			Unit weight of arrived, in %			Unit weight of arrived, in %		
	Whole	Incl: Men	Women	Whole	Incl:: Men	Women	Whole	Incl:: Men	Women
Whole population	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
				including:					
Before 16 (1989-1974)	8,2	8,9	7,5	7,3	8,0	6,7	10,8	11,6	10,1
16-19 (1973-1970)	4,0	4,4	3,6	4,3	4,7	4,0	3,1	3,6	2,6
20-24 (1969-1965)	7,1	7,7	6,5	6,8	7,9	5,9	7,9	7,4	8,3
25-29 (1964-1960)	10,8	12,2	9,6	10,4	11,9	9,0	12,1	13,0	11,2
Total: 20-29 years	**17,9**	**19,9**	**16,1**	**17,2**	**19,8**	**14,9**	**20,0**	**20,4**	**19,5**
30-34 (1959-1955)	12,1	13,4	11,0	11,9	13,2	10,9	12,7	14,1	11,4
35-39 (1954-1950)	11,3	12,4	11,1	12,4	12,5	10,8	10,7	12,2	9,2
Total: 30-39 years	**23,4**	**25,8**	**22,1**	**24,3**	**25,7**	**21,7**	**23,4**	**26,3**	**20,6**
40-44 (1949-1945)	7,1	7,8	6,6	7,6	8,1	7,1	5,8	6,7	4,9
45-49 (1944-1940)	7,4	7,8	6,9	7,8	8,3	7,4	6,0	6,7	5,4
Total: 40-49 years	**14,5**	**15,6**	**13,5**	**15,4**	**16,4**	**14,5**	**11,8**	**13,4**	**10,3**
50-54 (1939-1935)	8,1	8,2	7,9	8,3	8,4	8,2	7,3	7,6	7,1
55-59 (1934-1930)	7,2	6,9	7,4	7,2	6,9	7,4	7,2	6,9	7,6
Total: 50-59 years	**15,3**	**15,1**	**15,3**	**15,5**	**15,3**	**15,6**	**14,5**	**14,5**	**14,7**
60-64 (1929-1925)	6,5	5,4	7,6	6,5	5,3	7,5	6,7	5,6	7,7
65-69 (1924-1920)	3,6	2,0	5,0	3,6	1,9	5,0	3,6	2,1	5,1
Total: 60-69 years	**10,1**	**7,4**	**12,6**	**10,1**	**7,2**	**12,5**	**10,3**	**7,7**	**12,8**
70 years and older (1919)	6,6	2,9	**10,3**	6,7	2,9	**10,0**	5,9	2,7	**9,3**

As part of migrant, arrived from the previous place of residence, the biggest unit weight (23,4%) had migrants 1950-1959 years of birth, that means 30-39 years old. This group is practically equally represented in the common index of all migrants. A little bit higher is the index of migrants-men (within 25,7%-26,3%), than of migrants-women (from 20,6% to 22,1%). The following age group, which in its unit weight gets the second point is population of 1960-1969

years of birth (20-29 years old). In the whole group of arrived migrants among urban and countryside population they were 17,9%, including migrants-men — 19,9%, migrants-women — 16,1%. The same situation is among migrants in urban population, except migrants-women (14,9%). Among migrants of countryside population each fifth was 20-29 years old. Approximately equal positions deserved age groups of migrants of 1940-1949 and 1934-1939 years of birth among the countryside and urban population. At the same time among countryside population it is detected higher unit weight of migrants 50-59 years old, irrespective of gender (14,5%-14,7%), and in the group of migrants 40-49 years old it was lower, than representatives of all population and of urban population. Each tenth migrant in the common group was born in 1920-1929 годах. A unit weight of migrants younger than 16 years old ranged from 7,3% (urban population) to 10,8% (countryside population). In group 16-19 years old this index was correspondingly 4,3% and 3,1%. Migrants of 70 years old and older were in the common group 6,6%. Each tenth migrant-woman in all women groups was 70 years old or older. In summary we would like to notice that the biggest unit weight in migration process accounted for population in working age.

Migration flows of Northerners

Not of a smaller interest are for us data on allocation of migrants according to previous place of a permanent residence, that means migration flows from urban localities and countryside (table 3).

According to population census of 1989, among 833490 migrants of urban and countryside population of the Arkhangelsk region, arrived from previous places of permanent residence, 353686 were townsmen (42,4%), from countryside arrived 476541 people (57,2%). 3263 migrants (0,4%) didn't note the place they arrived from. Among the menfolk all in all arrived 391772 migrants, including from urban localities — 177059 people (45,2%), from countryside — 213231 people (54,4%). 1482 migrants-men (0,4%) didn't note their previous place of permanent residence. Among the representatives of women gender there were 441717 people, among who 176627 lived in towns earlier (40,0%), in countryside — 263310 people (59,6%). Among migrants-women who didn't name their previous place of residence there were 1781 people.

A group of migrants younger than working age included 68 169 people. Among them 36213 people (53,1%) arrived from urban localities, from countryside arrived 31600 people (46,4%). Among the migrants-men and migrants-women a unit weight of arrived from urban localities was higher than from countryside. A group of migrants of working age the situation is directly contrary. More than half of them, including men and women, named countryside the previous place of a permanent

residence. Practically three fourth of migrants older than working age (common group, women) represented the countryside direction, among migrants-men — 69,8%.

Table 3

Allocation of migrants in the Arkhangelsk region according to previous place of a permanent residence [2]

Population	*Urban and countryside population*			
	Arrived in common	Included		Didn't note the place of previous permanent residence
		From towns	From countryside	
Both gender				
Whole population	833490	353686	476541	3263
Including the age of:				
younger than working age	68169	36213	31600	356
working age	593133	273317	317516	2300
older than working age	172188	44156	127425	607
Men				
Whole population	391772	177059	213231	1482
Including the age of:				
younger than working age	34853	18732	15945	176
working age	316850	146357	169301	1192
older than working age	40069	11970	27985	114
Women				
Whole population	441718	176627	263310	1781
Including the age of:				
younger than working age	33316	17481	15655	180
working age	276283	126960	148215	1108
older than working age	132119	32186	99440	493

Let's compare the data received on number of migrants, arrived from urban localities and from countryside. Through the region in whole this correlation makes 122855 people in favor of countryside migrants, among them men — 36172 people (29,4%), women — 85683 people (70,5%).

[2] City records of the Arkhangelsk region, f.1892, op.27, d.40, p.39.

A surplus account appeared for urban migrants in comparison with countryside migrants in three age groups: younger than working age — 4613 people, 20-24 years old — 6400 people, 25-29 years old — 2526 people. The same picture is presented among groups of men and women. In other age groups correlation appeared to be in favor of migrants from countryside.

As part of urban population it was counted 624182 migrants. Among them 43,4% arrived from urban localities, 56,1% from countryside. From 291777 migrants-men 46,4% called their previous place of residence urban localities, 53,2% — lived in countryside. Among 332405 migrants-women form towns arrived 40,8%, from countryside 58,7%. 0,5% didn't note the place of their previous permanent residence. There hasn't noticed differences in this index between men and women migrants.

In a group of people younger than working age a unit weight of migrants from urban localities composed 59,1%, from countryside — 40,1%. Indexes between migrants men and women are practically the same. Among migrants of working age number of arrived from countryside was a little higher than from towns. This correlation composed 53,9% to 46,6%. There were no sufficient differences in indexes between migrants men and women. Among the migrants of older than working age 73,0% arrived from countryside, 26,6% — from urban localities. For countryside migrants-women this index was 5,7% higher, than for migrants-men from countryside.

Our conclusions are supported by data, which characterize correlation of migrants arrived from countryside to migrants arrived from urban localities. In quantity and percentage it composed 79400 people (12,7%) in common group of migrants, 19919 people (6,8%) — among men, 59481 people (17,9%) — among women. In the population younger than working age a tendency to exceedance of migrants' unit weight of those who arrived from towns to migrants who arrived from countryside is proved. In group of working age and older than working age migrants there is a contrary tendency.

In migration allocation of countryside population 60,3% were migrants, who arrived from countryside, 39, 6% - who arrived from towns. At the same time unit weight of migrants-women, arrived from countryside, was 24,9 points higher, than migrants-women from urban locations. Among the migrants-men this correlation was also in favor of countryside migrants — 58,1% to 41,8%. The biggest unit weight among migrants belonged to population in working age, including arrived from urban locations — 44,3%, from countryside — 55,6%. The next group were older than working age. 77,1% of population changed their previous place of permanent residence in countryside, in urban localities — 22,8%. In a group of younger than working age 44,1% used to live in towns, 58,9% arrived from countryside.

According to 1989 population census there were 31278 of men and women migrants in the Nenets Autonomous Area. 19181 people (61,3%) of them arrived from urban localities, 11960 people (38,2%) - from countryside. 137 migrants (0,4%) didn't note their previous place of residence. Among the urban population there were 22204 migrants, among who changed their previous place of permanent residence in town 13896 people or 62,3%, who left countryside — 8171 people or 36,8%. Among the countryside population there were 9074 migrants, 58,2% of them left towns, 41,8% — countryside.

Among the group of migrants younger than working age of both gender there were 4334 people, in urban localities — 3216 migrants (74,2%), in countryside — each fourth appeared to be a migrant. From the common number arrived in the NAA left towns 3066 people (70,7%), left countryside — 1256 people (29,0%). From the number arrived to the town 74,8% appeared to be migrants from towns, 24,8% — migrants from countryside. From the number arrived to the countryside 59,0% were migrants from towns, from countryside — 41,8%.

In the working age group there were 24180 migrants, or 77,3% from the common number of arrived. In this group 64,0% arrived from urban localities, 35,5% — from countryside. A unit weight of those arrived to the town practically didn't differ from those arrived to the village. Such a situation was committed on this group of migrants in countryside.

As for migrants older than working age, from 2764 people, arrived in NAA, only 629 or 22,8% earlier lived in urban localities, while 2126 migrants (76,9%) changed their previous permanent place of residence in countryside. Practically the same situation is noticed on groups of migrants in both town and countryside.

Preferences of migrants

Studying of the Arkhangelsk region population census materials lets us find out a number of groups of localities, which were preferred by migrants with the idea of future realization of their life journeys.

The first group included cities. Analysis of population census data, undertaken in the years 1926-1989, helps to make conclusions on the tendency of the Arkhangelsk region's cities population growth during the Soviet period. When 1926 in the cities lived 95455 people, by the year 1939 the number was 388625 people, that means population increased four times. Twenty years later, according to the census of 1959, number of urban population increased four times. During thirty years later of that census population increased two times and 1989 it composed

955381 человек. In common, in 1926-1989 population rate of those who live in towns of the Arkhangelsk region increased a tenfold.

Let's take the analysis of population size change in towns of the region. It can show preferences of migrants when choosing one or another place of their future permanent residence. The most important factor, which influenced the migration behavior of population, was appearance of new towns on the territory of the Arkhangelsk region, which even at the origin of their foundation and later development acquired an all-Union importance. Firstly, it was Severodvinsk. It appeared on the base of village Sudostroy, which was awarded the status of a town 1939. During the years of Soviet government Severodvinsk became the greatest cluster of soviet shipbuilding. Its population increased in 1939-1989 more than ten times (11,9). During the post-Soviet period it decreased on 24,2%. Among the males this index was 31,8%, among female - 16,2%.

Factor of region's centre also defined the vector of migration preferences of population. Population size of Arkhangelsk by the year 1926 was 71514 people, in 1989 — 416812 people, that means it has increased 5,8 times. Census of 2010 showed reduction of urban population for 68029 people or 16,3%. Number of males decreased 19,4%, women — 13,6%.

As a factor we can also consider advantageous geographical position of some towns, proximity to traffic arteries, which supplied the increase of their roles in socio-economic and cultural development of particular territories of the Arkhangelsk region. These towns became «centers of attraction» of population, and foremost from nearest countryside. To the number of such towns we can name Kotlas, Velsk, Onega. In the first town population has increased during 1926-1989 for 15,9 times, in the second — for 7,5 times, in the third - for 4,8 times.

One more factor is connected with the status of towns as administrative centers (former and present) of unitary areas. Estimates of countryside population growth looked ambiguous. For example, in Kargopol in 1926-1989 population has increased 3,8 times, in Shenkursk - 2,9 times, in Mezen' - 1,71 times, in Sol'vichegodsk and Nyandoma - 1,6 times. In Naryan-Mar, when taking into account number of residents without those who lived 1939 on ships, population rate has increased 1,9 times.

To the second group we would like to place urban-type settlements (earlier — worker's settlements). In 1926 there lived 11156 people, in 1979 — 239897 people, which spoke for positive dynamics of population increase, including migrants. Nevertheless, population census of 1989 noticed decrease of population (196143 people), which could allow us to make a suggestion about decrease of migration in this group of urban localities.

Third group includes rural communities, which considered to be administrative centers of village regions. 7 rural communities were under issue, which in 1989 saved its administrative status. When 1926 there lived 4643 people, by the year 1989 - 30946 people. As we see, population rate has increased 6,6 times. One of the factors of its growth was firstly considered to be migration of countryside population.

In the fourth group we included villages, which became central farmstead of kolkhoz and sovkhoz, and also villages of timber procurers and other branches of national economy in countryside areas of northern regions. A migration flow in them was formed because of countryside population, who lived in areas, which considered to be «unpromising» or had a temporary status of settlements of production and transport meaning (timber villages, railway barracks and sidings, and others).

Northern village: consequences of migration

Migration processes, which took place in conditions of territorial and settlement structure transformation in the countryside areas of the Northern region, had its negative consequences for life-sustaining activity of countryside population. During the period 1926-1989 it has decreased 1,8 times. By that between population censuses of 1926 and 1939 countryside population has decreased over 67520 people, population censuses 1939 and 1959 - for 111949 people, censuses 1959 and 1989 — for 146774 people.

Let't address to materials of two simultaneous statistical surveys on number of peasand holdings in different ways of socialized cooperation in countryside areas on the 1st of Janury 1940 and number of kolkhoz households on the 1st of January 1950, which are showed in table 4.

Table 4

Number of peasant and kolkhoz households in countryside areas of the Arkhangelsk region (0.1.01.1940 - 01.01.1950)[3]

Countryside areas	On the 1st of January 1940		On the 1st of January 1950	Correlation of number of households on 01.01.1950 to number of households on 01.01.1940			
	Total peasant households	Incl. peasant households	Total kolkhoz households	All peas-ant house-holds	In %	Peasant households	In %
Arkhangelsk sovkhoz	-	-	487	-	-	-	-

[3] Without Nenets Autonomous Area

Belomorsky	-	-	1546	-	-	-	-
Velsky	5771	4927	5184	-587	89,8	257	105,2
Verhnetoemsky	6125	5734	5336	-789	87,1	-398	93,1
Vilegodsky	5569	5569	5405	-164	97,1	-164	97,1
Vinogradovsky	5372	5372	4582	-790	85,3	-790	85,3
Emezky	4091	3220	3804	-287	93,0	584	118,1
Kargopolsky	7656	7656	6922	-734	90,4	-734	90,4
Karpogorsky	4874	4838	4376	-498	87,8	-462	90,4
Konoshsky	4909	4909	4108	-801	83,7	-801	83,7
Kotlassky	4821	4821	3602	-1219	74,7	-1219	74,7
Krasnoborsky	4400	4357	4317	-83	98,1	-40	99,1
Lensky	3941	3941	2679	-1262	68,0	-1262	68,0
Leshukonsky	3066	3066	2833	-233	92,4	-233	92,4
Mezensky	3336	2384	2673	-663	80,1	289	112,1
Nyandomsky	3476	3476	2088	-1388	60,1	-1388	60,1
Onezhsky	5143	4310	2692	-2451	52,3	-1618	62,5
Pinezhsky	4151	4151	2227	-1924	53,6	-1924	53,6
Plesetsky	5337	5337	2410	-2927	45,2	-2927	45,2
Priozerny	5215	5215	2130	-3085	40,8	-3085	40,8
Primorky	3954	2329	5827	1873	147,4	3498	250,2
Rovdinsky	6387	6303	4912	-1475	76,9	-1391	77,9
Sol'vichegodsky	3433	3433	2611	-822	76,1	-822	76,1
Ust'yansky	7350	7350	6736	-614	91,6	-614	91,6
Kholmogorsky	5400	4921	4379	-1021	81,1	-542	89,0
Cherevkovsky	5797	5773	4741	-1056	81,8	-1032	82,1
Shenkursky	4564	4196	4429	-135	97,0	233	105,6
Total through regions	**124138**	**117588**	**103036**	**-21102**	**83,0**	**-14552**	**87,6**

During ten years number of peasant households in all the cooperated forms in socialized national economy in 1940 has decreased, in comparison with number of kolkhozes in 1950 for 21102 numbers (17%). Number of peasant households, which formed part of communes, agricultural guilds and faring comradeships, that means predecessors of kolkhoz cooperation has

lowered from 117588 in 1940 up to 103036 kolkhoz households in 1950. The reduction composed 14552 of household or 12,4%.

Comparative study of data in different households of kolkhozniks to the 1st of January 1950 with data in households of peasants to the 1st of January 1940, educes some other results. A A correlation of numbers of all peasant households and actual households of kolkhozniks reduces for 27418 units or for 22,1%. The difference possesses 6316 «absent» households (5,1%) to 01.01.1950, for the second group number of «absolutely» peasant households the number of absent households stays the same, but the index composes 5,3%, which 0,2 points higher than the first group. During the period 1940-1950 number of private households and uncooperated artisans reduced from 1783 to 177 or for 90,1%.

With a breakdown into countryside areas from the point of view of population migration processes study the most interesting for us is the data of absent households group. According to the data of statistic investigation of 1950, a unit weight of all these households at the regional level contained in common group 4,9%. Such a level is in exceed in eleven countryside regions. For example, in Plesetsky region it was 18,0%, in Kargopolsky — 14,3%, in Shenkursky — 11,9%, in Primorsky — 9,6%. In all the other areas this level was lower than regional.

In group of kolkhoz households there were 6,1 absent households. In Priozerny regions they were 23,9%, in Kargopolsky — 16,2%, in Shenkursky — 14,5%, in Primorsky — 11,8%. In other countryside areas a unit weight varied between 0,4-4,7%.

As part of households of other groups of population it was noticed 2,9% absent households. There were no only in Konoshsky region. In nine regions this index was higher than regional one, in others - lower than this index. In Plesetsky region abandoned were 14,8% of households, in Krasnoborsky - 6,8%, in Kotlassky — 6,3%, in Vinogradovsky — 6,0%, in Primorsky — 5,3%, in Shenkursky — 4,8%.

Pic.1. Photo V.I.Belov. URL: http://img0.liveinternet.ru/images/attach/b/3/10/617/10617516_Belov.jpg

Socio-economic and spiritually moral consequences of socialistic rebuilding of the Northern countryside world into «kolkhoz-sovkhoz village» thoroughly brought to light in their fictions and publications F.A.Abramov and V.I.Belov.

«All our life, — as justly noticed F.A.Abramov, — is all over rebuilding. In the centre its damage is not so striking. But the periphery was broken with these rebuildings. Many regions were liquidated. And now they trailed by 10-15 years. As a result of rebuilding all the population scattered about. The most passive element was left there. Worthless. Drinkers, lazybones and weak-willed» [1, pp.144-145].

But nevertheless, as V.I.Belov wrote «… native village was native without any extravagance. Even the most bitchy abjurer or habitual drunkard, who by a twist of fate appeared to be somewhere so far from home, rushed home. He knew that in his village he would find compassion, and understanding, and forgiveness, when he went wrong…And what could be more blessing for awake conscience? To rend a person from his motherland means to crush not just economic but moral living base» [2, p.115].

Pic. 2. Photo F.A.Abramov. URL: http://www.arhnet.info/files/imagecache/i_anews_page/1368023891.jpg

But also the Northern village itself survived difficult and contradictory period of its existence during the period of Soviet government. F.A.Abramov underlined: «Everything was. There was a «breezy» labor day, was wear and tear labor, were crippling taxes and loans. What has our village has recovered during war and postwar periods!». At the same time he marked that all that was at the back and it was impossible not to delight in that prosperity, which had come to Pinega, to our village. And all these changes happened, firstly, because of government, due to all the increased state inputs and donations [3, p.13].

But at the same time life-sustaining activity of countryside societies was instantiated on one hand, in indifference, inactivity, lack of sense of responsibility by his representatives for disregarded public economy, and, on the other hand, rural men still had «age-old experience» of work on their lands. Attitude of people to work, to household, even to themselves has changed. «Where is he, Russian peasant, whom iconized all Russian authors of the past?», - wondered F.A.Abramov [1, p.428].

As for vanguard role of regional government, kommunists and Komsomol members in organization of social life and decision of everyday questions of life-sustaining activity of home folks, «And in their environment entered the existing nowadays sickness of indifference». For instance, in just one Verkova 25 deputies were chosen. And so residents of Verkova appreciated the effectiveness of their deputy activity: «Later it was just one village chief, but there was more

order» [3, p.17-18]. It was out of the question any effective local administration in countryside area.

Conclusion

1. According to the data of population census 1989, each second resident of the Arkhangelsk region changed his permanent place of residence. There was no substantial difference between urban and countryside residents according to time groups of duration of resistance, except the group with duration of resistance 25 years and more. In this group differences contain 17,1 points for migrants as part of urban residents. A comparative study of migrants-men of urban and countryside population index shows inconsequent differences between them. They are bigger in group of migrants-men with duration of resistance 25 years and more in the places of permanent residence. As part of urban population this index was 44,5%, of countryside one — 26,9%. Speaking about migrants-women, we must pay attention on indexes of duration of permanent residence in two time groups: 20-24 years — 70,3% by countryside and 62,5% by urban migrants, 25 years and more: by citizens — 53,8%, by countryside population — 37,3%.

2. Materials of population census of 1989 speak for the fact, that migration flow of the Arkhangelsk region population included 57,2% of its residents, arrived from countryside, 42,4% — arrived from urban areas. By that, in age groups before 16 years old and 16-29 years old a migration flow from urban settlements was more intensive than from countryside. In other age groups unit weight of migrants from countryside was higher than from urban settlements.

The highest index in migration activity is noticed among migrants of 1934-1919 years of birth and older. It was by migrants of 70 years old and more — 76,5%, in other groups — from 71,4% to 73,5%. Results of population census of 1989 let us make a conclusion on intensity of migration flows, appeared in the studied Northern region during the Soviet period of economic exploitation of its natural resources.

3. Study of migration behavior let us educe types of urban and countryside settlements, which were preferred by migrants while choosing their permanent place of residence. To these settlements we can take towns, which population has increased during 1926-1989 ten times, urban-type settlements, administrative centers of countryside regions, main farmsteads of kolkhozes, sovkhozes and other settlements of production purpose.

4. Transformation changes, happened in territorial and settlement structure of the Arkhangelsk region during the Soviet period of its history negatively influenced socio-economic

development of the Northern village. Countryside population escalated 1,8 times. Institute of private and settlement-peasant property practically was destroyed. For example, in 1940-1950 number of private peasant household was down by 17%, of private and uncooperated artisans by 90,1%. Place of peasant-owner was taken by kolkhoznik or man working in sovkhoz with its detached attitude to public property and results of his labor in socialistic form of collective economics organization. A Soviet model of local public government represented by deputy corps appeared not to be ready to solve urgent problems of local communities' life-sustaining activities.

In a word, begun by the end of the 20s of the XXth century social rebuilding of the Northern village finished by the end of 80s with its social and moral degradation. Perspectives of its development in perception of F.A.Abramov were absolutely not magnificent. In his letter to P.A.Hudyakov on the 23rd of January 1971 he wrote: «And Russian village — forgive and adieu. In thirty years what will remain? It is evident: technical revolution in the countryside is unsuitable for the village born in feudalism. On the West it has already died away…» [1,p.458].

40 years has passed after overwhelming forecast of the Russian village future, which was given by F.A.Abramov in his letter. How has it borne out? So, this is the topic of another article.

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TOWNS OR HOTELS? GAS WORKERS TOWNS' CONSTRUCTION ISSUE IN YAMALO-NENETS AUTONOMOUS OKRUG IN THE LATE 1960S

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Abstract. In this article the formation of the urbanized region of the north of the West Siberia is analyzed on the basis of the conference materials on urban development in the gas-bearing areas of the Tyumen region in 1968.

Keywords: *external, internal, centralized resettlement; urban planning development, West-Siberian oil-and-gas complex, urbanization.*

Introduction

Problem of Ural High North and Northern Siberia has always attracted historians. Traditionally historiography payed attention on Yamal colonization during the pre-revolutionary period, though the post-Soviet historical science even more often began to appreciate practice of region's colonization during the period of creation and development of the Western-Siberian oil-and-gas complex (WSOGC) in 1960-1960s [1]. But scientists could't give answers to all the discussed questions. Firstly, it refers to question of preference of colonization and foundation of towns in gas-bearing northern regions. Though the acuteness of this problem nowadays is evident because of uncertainty of Yamalo-Nenets gas-exploitation towns' future development and development of a perspective strategy for Yamal development on a new level [2]. This article contains an attempt to answer some actual for those days questions. Main positions of project institutes, departments and regional government on the issue of Yamalo-Nenets towns' development, now being part of the Russian Federation Arctic zone, are determined.

1960s: searchings for colonization systems by exploitation of hydrocarbons of Tyumen North

Discovery and started commencement of oil and later gas minefields in the beginning of 1960s appeared to be the first reason for Tyumen North urbanization. Growth of productions, and as following, - number of workers, determined appearing of a question on their resettlement. Tyumen region didn't possess great manpower, which were ready to serve branches of oil-and-gas

exploitation. Colonization of the region from outside went at a good clip. Near the minefields deprived settlements of geologists, oil workers, constructors and gas workers were created spontaneously. In 1964 a status of industrial communities got settlements Igrim in Khanty-Mansiisk district and Tazovsky in Yamalo-Nenets district, which were situated near opened gas minefields. As a result, mostly because of spontaneity of migration and town building in oil regions of Middle Priob, there appeared a problem before the directorship on forming of such a system of resettlement, which would promote economic, intensive and qualified development of oil-and-gas extraction production.

The challenge became more difficult with the fact that industrial development of the region continued to move to the north, in Yamalo-Nenets area, where colossal volumes of gas were founded: Tazovskoye (1962), Novoportovskoye (1964), Gubkinskoye (1965), Zapolarnoye (1965), Urengoyskoye (1966), Medvezhye (1967). An international practice didn't possess knowledge in exploitation of such great gas minefields, which were situated, by the way, in difficult climate conditions. A concept of development of Tyumen region Northern areas should be formulated, and it was also important to come up with tactics of workers' resettlement. Decision of this problem was charged to science-technical conferences on problems of city planning in oil-and-gas bearing areas of Tyumen region, organization of which was initiated by Tyumen CPSU regional committee in the second half of 1960s. On these conferences discussion on building of new towns in oil-and-gas bearing areas of Western Siberia took place.

In scientific literature, dedicated to WSOGC, an opinion was formed that great importance in creation of town building concept and strategy of oil-and-gas bearing areas development belonged to 3 science-technical conferences. Discussion on town building, appeared on conferences, is noted in works of A.I.Prishepa [3, p. 138; 4, pp. 117-118]. A historian arrived at a decision, that in spite of most of scientists' and practicians' suggestions for «inside resettlement» (that means large scale town building in the region), instead of outside variant (building of worker's settlements and airports, and all the works were executed by specialists from «mainland»), there was no definite strategic decision for a long time. According to the point of view of N.Y.Koleva, after argues and discussions an opinion was predominant, that towns must be founded from many-storeyed buildings made of noncombustible constructions and materials, and also idea of building of number of big cities, from which more remoted areas would be assimilated by work on a rotational basis [5, p. 237]. A historian N.Y.Gavrilova had another point of view [6, p. 233]. She thought that conferences supposed creation of two types of settlement: traditional (creation of towns 40-50 km from deposits and mobile settlements) and rotational. N.Y.Gavrilova

noticed that there were more supporters of traditional approach, and realization of resettlement based on traditional principles began. It is evident that historians' view were different. The reason for it is ti be seen not in the target of research, which could'n be interpreted unambiguously, but in insufficient enlistment of sources. Analysis of historians was based on memoirs (A.I.Prishepa, G.Y.Koleva) or on some newspaper publications (N.Y.Gavrilova). Materials of the conferences as originals were not used in researches.

Together with it we must notice that historians analyze only two Tyumen conferences - of 1966 and 1969. At the same time, the conference, which took place 1968 and touched the problems of resettlement in gas regions, was left out in the cold. In this context a present article enter for the first time in science not only materials of the conference held 1968 on town building, but also opens for researchers of the Western Siberia North the fact of existence of such a conference, which was the greatest event during the period of discussions on building of towns for oil and gas workers in the Western Siberia. Probably, this article couldn't have appeared, when the authors hadn't found a sourcebook in one of Tyumen libraries.

The most well-known conference nowadays on problems of urban planning was held in June 1966. The latest researches showed that the main line of resistance during the conference was between Ministry of Oil Industry of the USSR and government of Tyumen region [7, p. 102-103]. Heads of the region called for centralized resettlement in big cities with extensive use of rotating scheme in areas of oil-and-gas exploitation, and oil workers - for method of resettlement, which supposed creation of small towns near deposits. Ultimately the point of CPSU Tyumen regional committee was adopted, that means the centralized resettlement with predominant creation of well-appointed cities-centers of big regions and neighboring groups of deposits. Nevertheless, participants of the conference of 1966 talked about the united system of resettlement in Tyumen region, which affected both oil and gas regions, the main emphasis was on urban colonization of the oil production territories, thus the region of Middle Priob and Khanty-Mansiisk district. But with discovery of unique gas deposits on Yamal, a question on methods of resettlement in gas regions appeared simultaneously.

In the beginning of 1966 gas deposits of Berezovo-Igrimskaya group were introduced into development; they were situated in Khanty-Mansiisk district. Together with it, Yamal deposits of gas demanded its seepage. The first secretary of Tyumen regional committee B.E.Cherba even in May 1966 in newspaper «Tyumenskaya pravda» called «to adopt immediately a program of crash development of gas production in Tyumen region» [8, p. 62]. Nevertheless, because of unclarity

with volumes of deposits and lack of foreign practice of gas exploitation in such northern points, preparations for exploitation of new gas deposits was suspended.

The situation began to change in the end of 1967 - beginning of 1968, when in January the Tyumen region was visited by Chairman of the Council of Ministers of the USSR A.N.Kosygin, who during the meeting emphasized that on deposits of gas the region was becoming one of the greatest in the world. During this meeting the USSR State Committee for Construction was charged to «speed up development of projects of residence buildings and cultural and general objects for the regions of high North»[1]. A visit of Kosygin brought the end to argues containing exploitation of northern gas deposits. Final acknowledgement of great economic meaning of Tyumen region gas areas succeeded in Resolution of the Council of Ministers from 17th of May 1968 «On actions for preparations on building of great gas fields and pipelines».

But government of Tyumen region didn't wait for decision from the up and began to search for ways of Yamal exploitation. Activation of regional governmental bodies was connected with discovery in 1967 of unique by its deposits of gas field - Medvezhye. The greatest part of this strategy was the approach in urban settlement development, for which discussion it was decided to run a conference. On the 26th of December 1967 a decision of CPSU Tyumen regional committee and Regional Executive Committee «On organization questions of science-practical conference on problems of urban development in gas areas of Tyumen region» [2] was adopted. A decision defined number of main reports and composition of organizations-participants. Among the organizations-participants there were Ministry of the Gas Industry of the USSR, Main Tyumen Oil-and-Gas Construction, Tyumen Gasprom and many project institutes. All in all there were 66 organizations. By that way there wasn't presented Ministry of Oil Industry of the USSR and Chief Tyumen Oil and Gas, what was logic because they were engaged in oil exploitation production, but not in gas exploitation production. The chairman of the conference's organization committee was secretary of CPSU regional committee E.A.Ogorovnov who supervised in the party problems of construction.

Conference took place on the 26-28th of June 1968. Opening of the conference was charged on the second secretary of CPSU Tyumen regional committee A.K.Protozanov, who wished all its participants fruitful work[3]. Structure of conference repeated structure of conference

[1] State-financed institution of Tyumen region State record of socio-political history of Tyumen region (SFITR SRSPHTR). F. 124. Op. 1. D. 4966. P. 15.
[2] SFITR SRSPHTR. F. 124. Op. 1. D. 4795. Pp. 22-27.
[3] Tyumen pravda. 1968. № 149. P. 1.

held 1966. The first session was connected with regional planning and resettlement. During the second session questions on planning, development and engineer equipment of cities and settlements were overviewed. The third session involved problems of structural design of buildings, lower layers and ground works of constructing geology.

Unlike the conference held in 1966, representatives of departments, to unknown reason, didn't present their reports for participation (at any rate, these reports were not published). A possibility is not excepted that departments could just ignore invitation of CPSU Tyumen regional committee. It could be connected with the fact that in this period of time between government of the region and oil-and-gas producing departments a struggle on issue of construction of oil workers' cities settlements of gas workers in Middle Priob has increased. Governmental bodies of the region with all its strength tried to direct development of the region on urbanization, the priority was given to creation of comfortable cities. Departments had another point of view - they were mostly interested in implementation of a program of oil and gas exploitation.

47 reports were published (probably more were listened), which brought up concerns connected with complex exploitation of Yamalo-Nenets are, including development of a system of transport, implementation of new types of housing and methods of construction, relevation of natural and landscape conditions. Bt the main question, which the conference must answer, sounded in such a way: whether construction of cities in gas areas of Tyumen region is viable?

USSR State plan was also against construction of cities in Yamalo-Nenets area. Chief of the sector of West-Siberian industrial complex of the USSR Council for the Study of Production Forces (CSPF) by State plan V.D.Belousov expressed the idea of creation of comfortable hotels in the region, where workers and engineers could live and work [9, p. 14]. Such a variant didn't demand for resettlement in northern regions of workers' families: «all the industrial-production staff live in such hotels and their families live in the regions of Tyumen, Tobolsk and probably in other places, with rather mild climate conditions» [9, p. 14]. After definite period of rotation, which determined in 15-20 days and more, all workers came to their families and than another pair arrived. According to the idea of State plan representative, hotels could surrogate cities and industrial settlements.

The main argument against construction of cities was expensiveness of this project's realization. The greatest expenses were connected with building construction and civil construction. According to the USSR State plan estimates, by resettlement of 21-24 thousand people, who provided functioning of oil-and-gas industry, for arrangement of stated number of people in cities and settlements, it was appropriate to invest 140-150 million rubles. At the same

time construction and upkeep of hotels of rotation type for accommodation in them of 6-7 thousand people stood for the state 45-50 million rubles [9, p. 13-15]. Another advantage was that by such a scheme of resettlement in northern regions didn't demand for engaging of teachers, doctors, commercial and cultural workers. That's why it was important to give up the idea of cities' construction in the High North of the region and to stop introduce here such a number of families and especially workers, engaged in industrial sphere. Though, at the end of the report representative of the State plan laid emphasis on the idea, that construction of hotels and cities in the region was investigated not enough, and only after thorough and strong investigation it would be possible to decide which method of resettlement would be more appropriate by exploitation of Northern gas fields. In the whole, the idea of hotels was based on suggestion that even by colossal volumes of exploitation of gas in the future (from 179 bln. to 310-360 bln. square meters up to the year 1975), demand in industry-production specialists, engaged in exploitation, would estimate 6-7 thousand people. Such number of workers could be serviced and by comfortable hotels.

Position of the USSR State plan wasn't supported by institutes of Giprogor and Leningrad institute for projecting of cities (Lengiprogor). For the speedy construction of cities was a famous Sverdlovsk architect G.V.Shaufler [9, p. 76]. According to his point of view, it could influence perspective development of gas areas.

At the plenary meeting of the conference projectors of Moscow Giprogor suggested 2 ways of solving this problem: internal and external [9, p.20-21]. *Internal* system supposed actualization of resettlement directly in the areas of gas exploitation, and *external* — out the Yamalo-Nenets area. System of internal resettlement included 3 possible variants:

a) «*group variant*», which supposed distribution of populated localities with population from 10 to 20 thousand people by the groups of mine fields (such cities should be Urengoy (Ygengoy group of mine fields), Nadym (mine fields Medvezhye and Yubileyny), Tazovsky (Zapolyarnoe and Tazovskoe), Tarko-Sale (Posovskoe and Gubinskoe), Novy Port (Yamal group of mine fields);

b) «*centralized variant*», which allowed construction of one great city with population up to 80 thousand people within the Yamalo-Nenets area for all groups of mine fields (such cities could become Urengoy and Nadym), which were operated with the help of rotation settlements;

c) «*Decentralized variant*», according to which small settlements with population under 2 thousand people by each production were constructed.

System of external resettlement supposed resettlement of gas workers and their families in one of the existing cities of Tyumen region in more mild climate conditions, with cheaper building construction. In the eye of Giprogor, such cities could be Tyumen and Surgut. With such an approach in the areas of gas exploitation, «Rotations for long term occupancy and the basis airdrome» were organized [9, p. 21], where workers were delivered from the centre of resettlement and were carried to productions. Actually, the variant of external resettlement was the same with the construction in the region of comfortable hotels.

All in all, according to specialists of Giprogor points of view, in the gas areas must come from 70 to 80 thousand people, and during peak of building in 1974-1977 extra 25-30 thousand people. When taking into account such volumes, the priority was given to internal way of resettlement with construction of one or few cities.

Constructors of Giprogor E.Y.Feigina and V.I.Zamerceva also noticed that composition of the Tyumen region northern regions must «be based on the principle of restraint and extreme density of the whole city» [9, p. 22]. To architects' point of view, planning must correspond with following regulations: «City is formed around the community centre with minimum disclosure to environment. It is rational to establish overdensity of residental areas in planning, which will give an opportunity to shorten the way from houses to cultural-domestic servicing and create in housing complexes close interior space with zones of relative wind calm» [9, p. 22-23].

Other variants of construction development of Yamalo-Nenets area were suggested. So, Krasnoyarsk «PromstroyNIIproject», engaged in problems of Norilsk industrial hub resettlement, recommended creation of pioneer settlements like mobile complex from movable detachable standard elements with high level of home-household and production comfort. And the result of the investigation process for the nearest future, to the natives of Krasnoyarsk points of view, were permanent settlements - local production areas for exploitation of gas fields [9, p. 38]. The USSR AS Institute of geography suggested a scheme of oil-and-gas resettlement, which included the centre of resettlement - a big city (up to 20 thousand people) — and smaller permanent and seasonable «satellites» [9, pp. 42-43]. According to the Siberian zone science-research and project institute (Sibzsrip), more perspective in production cities and settlements could be Tyumen, Syrgut, Tobolsk, Ishim, Zavodoukovsk, Lugovoy, Mezhdurechensky and Kondinskoye [9, p. 62].

According to Lengiprogor approach, the most important base of the Tyumen region North must become Salekhard and near to it working settlement Labytangi, which represented natural logistic base of gas areas exploitation [9, p. 54-55]. It gave place to the idea, that through Labytangi Salekhard was connected with railway net of the European part of the country. Institute

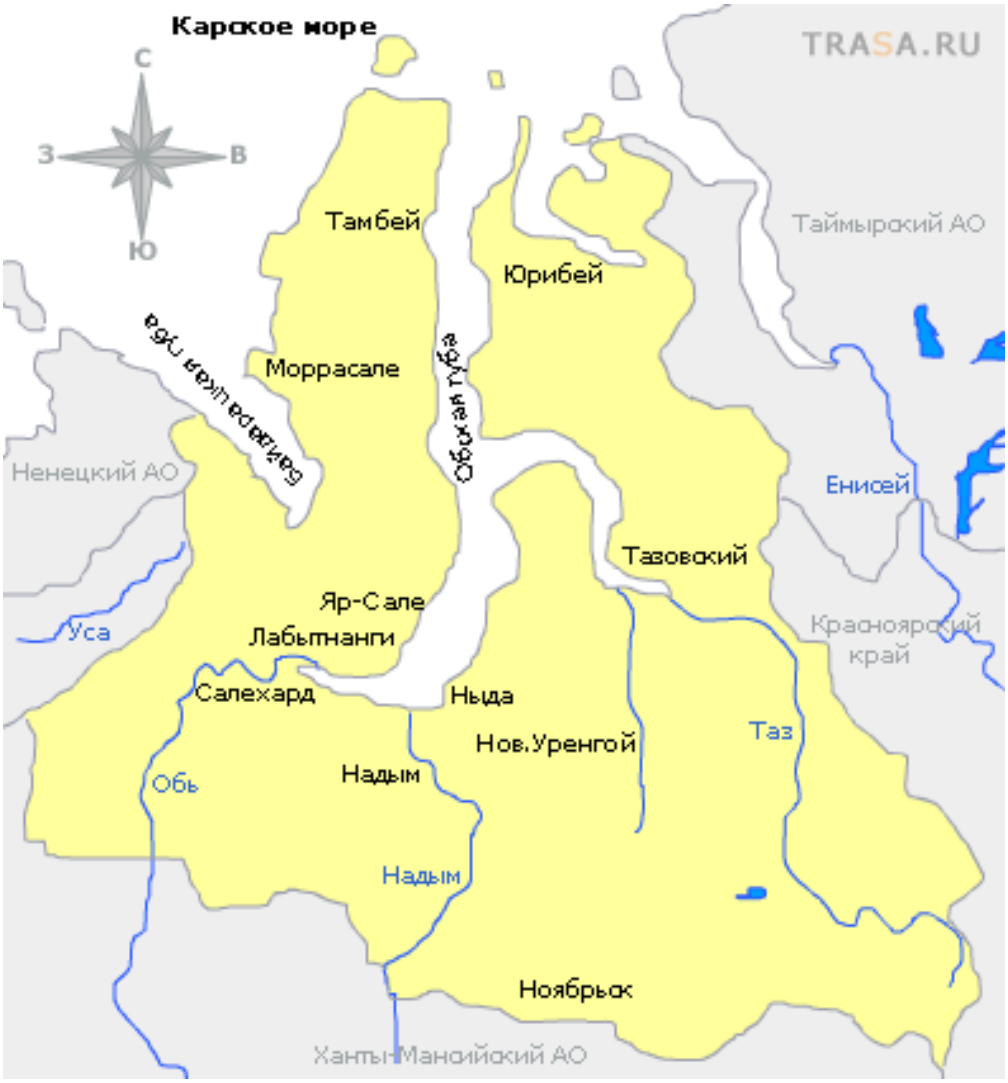
noted that during some period of time there was no major construction work in Salekhard and Labytangi. It was connected with that settlements were situated in the zone of possible flooding during construction of Lower Ob hydro-electric power station. At the same time problem of Lower Ob hydro-electric power station construction was touched, which construction, according to the institute point of view, not only complicated exploitation of gas fields, but also crossed out construction development of the Tyumen North. Director of the institute K.N.Nelyubin pointed, that Salekhard must be developed on either existed territory or on new grounds as «compact comfortable city — centre of Yamalo-Nenets area and new gas industrial capital of Siberian North, but not as accidental gathering of disengaged and ill-provided settlements» [9, p. 55].

Specialists of Central science-research and project institute of house and commercial buildings (CNIIEP) placed emphasis on existence of inadmissible fact, which appeared in house-commercial construction on the North of Tyumen region, namely - «appearance of big without modern conveniences timely settlements of building productions, which resulted that new city was constructed in the North for two times» [9, p. 105]. Mainly such a situation took place because of departments' policy.

Participants of the conference noted that high speed of oil-nad-gas exploitation leaded to the situation, when departments by themselves began to accommodate and cities and settlements began its construction without any scheme of regional planning and general plans of development. Specialist of the Siberian Science-research institute of transport construction (SibSRITC) V.Y.Tkachenko thought that department approach for planning and economic grounding of a new area provided «diffusion of fundings for the same goals, its ineffective usage» [9, p. 49]. Director of Lengiprogor K.N.Nelyubin expressed himself more strong: «We are standing before threat of disorder, lack of any general plan, department construction of both banks of Ob, which would devour Salekhard, which would divest it with any construction perspectives» [9, p. 55]. Most of projected institutes gave its negative appreciation to the construction policy of ministries and departments, who possessed direct construction, were employers of house-commercial and culture-household construction in cities, and in some moments they were builders. For solution of this problem representative of Novosibirsk Engineer-construction institute named after V.V.Kuibishev I.F.Malkov suggested creation of special organization «Priobgrazhdanstroy», which would fulfill the function of the only developer of house and culture-commercial construction in gas cities [9, p. 111].

All in all most of participants evidently expressed themselves for construction of cities and settlements in the areas of gas exploitation. Construction of hotels wasn't seriously overviewed by government of the Tyumen region not only because of forecasted by the USSR State plan

population census was improbable small, but firstly because of small volumes of funding and unrealizability of region's complex development by such a hotel project, for which with all their strength struggled local powers. In much under the influence of the conference, the USSR State plan overviewed its position concerning building construction in the Yamalo-Nenets area. Later, as subsequent events showed, centralized variant of internal resettlement was supported, which was suggested by Giprogor. This variant found its way into decisions of CC CPSU and the USSR Council of Ministers from 11th of December 1969 «of measures for speedy development of oil-and-gas industry in the Western Siberia» and from 21st of December 1971 «Of measures of future development of cities and settlements in areas of oil-and-gas exploitation of Тyumen region».



Pic.1. Yamalo-Nenets Autonomous Area. URL: http://neftegaz.ru/images/NAO.gif

When by centralized resettlement of Middle Priob oil areas it was decided to construct number of powerful cities-centers, where rotations and expeditions were sent from for exploitation of natural resources, in gas areas of High North it was decided to found one base city-

center. From all the suggested variants (Urengoy, Salekhard, Nadym), the choice was for projected city Nadym.

Firstly, this city became basic for exploitation of gas field Medvezhye and gas pipe line reference point. Such scheme of resettlement was overviewed as the main by development by Giprogor in 1970 of regional planning of Nadym-Urengoy industrial region.

A general plan of Nadim, created by Giprogor in 1969, was proved by Tyumen Regional Executive committee in 1970. Population of Nadym for target time limit up to the year 1980 supposed to be 16 thousand people. In 1972 Nadym got the status of the city of under the okrug's jurisdiction, by that way it escaped the status of working settlement. But in 1970s realization of centralized resettlement in Yamalo-Nenets area was far from ideal. Gas departments were looking to create settlements by productions and near mine fields. In 1975 status of working settlement was given to Labitangi - center of Yamal geological exploitation. In 1976 status of working settlement was given to Tarko-Sale, which was formed as a base on Purpeysk group of oil fields, and 1979 working settlements became Noyabrsky, Pangody, Urengoy and Stariy Nadim. Departments demanded for creation of a base city and by great Urengoy gas field. Tyumen government was not ready to agree with construction of one more big city in north latitude, but nevertheless, in 1974 Regional Executive Committee adopted a general plan of Novy Urengoy, developed by Giprogor. Population for target limit up to 25-30 years supposed to be 30 thousand people, and to the year 1980 - 18 thousand people.[4] But departments started development of Novy Urengoy not according to the plan, and getting the status of a city ran over 1980.

Conclusion

In such a way, materials of the conference on town construction in gas areas of Tyumen region, held 1968 in Tyumen showed that during the discussion point of view of construction of cities in High North was adopted, and construction of hotels was delayed. Together with it it was decided to realize centralized variant of internal resettlement and construct in Yamalo-Nenets area only one basic city of gas workers, where exploitation of natural resources was held by rotating scheme. Though the adopted centralized resettlement at the end of 1960s, under the influence of uncontrolled politics of departments, in 1970s it appeared a realization of group variant of resettlement with creation of settlements in each big gas field. This fact again confirms thesis that city construction and resettlement in the USSR in conditions of industrialization of the North and Siberia took place locally and didn’t comply with city-building plans and projects,

[4] Archive department of Surgut administration. F. 80. Op. 1. D. 102. Pp 124-130.

Spontaneity and uncontrollability of urbanized process by realization of not enough strong and successive politics of regional government and all-might of industrial productions during exploitation of natural resources territories must be taken into account in strategies of High North and Arctic territories development nowadays.

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ORIGINS OF CULTURAL TRADITIONS OF RUSSIAN OLD-TIME RESIDENTS OF THE LOWER KOLYMA

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Abstract: This paper presents the preliminary results of a comprehensive study aimed at clarifying the origin of the local group Russian old residence in Nizhekolymskiy region of Republic of Sakha (Yakutia). Analysis of archaeological, ethnographic and folklore materials and datas of written sources revealed that cultural traditions of this group originate from Velikiy Ustiug and Arkhangelsk regions.

Keywords: *Arctic, Russians, traditional culture, historical ethnography, comparative analysis*

Introduction

Activation of Arctic economic exploration, revival of the Northern sea route again sparked the interest of researchers in peoples, who inhabit arctic coast of Russia. A special interest awakes Russian old identities of the Arctic regions, history of its formation, connected with arctic navigation, functioning of Russian cultural elements in new conditions, power of interconnection with cultures of indigoes peoples. One of these groups and are considered to be Russian old residents of village Pohodsk, situated in Nizhnekolymsky region, Sakha Republic (Yakutia) at 69° degrees north.

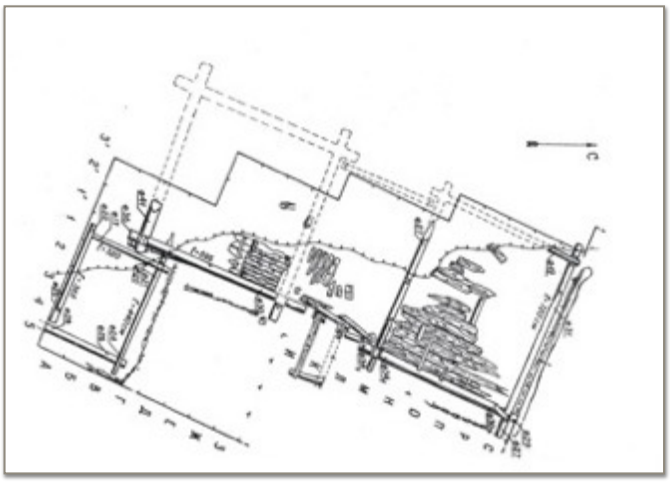
Residents of Pohodsk are less spoiled with attention, than their relatives Russkoust'incy, and when more than 200 pieces of literature of different genres from newspaper articles to serious scientific works are dedicated to the second group, the first group inducts small brochure of regional sketches «Pohodsk» [1] written by A.G.Chikaev and small chapters in his books «Russians in the Arctic» [2] и «Russian heart of Arctic» [3]. Residents of Pohodsk belong to the same ethnographic group as well-known Russkoust'incy, but unlike them, they don't have clear historic legend of their origin, and it is more important and interesting to find out where hark back traditions of this ethnic group.

In 1989-1990 an archeologist expedition of Yakutsk State university headed by A.N.Alekseev worked in Lower Kolyma, who was engaged in archaeological excavation of Nizhnekolymskoe wintering place — the first Russian settlement in this area [4]. In 2009-2011

excavations were continued by team of archeological expedition of SPA «Northern archeology 1» under the command of G.P.Vizgalov [5, 6, 7]. Collection of ethnographic materials were led by E.A.Strogova in 2005, 2009 and 2011. Collected during some years data of archeological, ethnographic, folk and historic researches let us make us such an attempt.

Russian settlements in Yakutia

First Russian settlements in the noted area appear in the beginning of 40s of the XVIIth century, and by the end of century the whole north of Yakutia is occupied by number of ostrozhka, «yasashniy» and «industrial» wintering places, most of which became extinct by the beginning of the XVIII century. «Numeration of far and near yasachny ostrozhka and wintering places of Yakutsk county governors» founded 1675[5] shows that there were no Russians on that territory. It is hardly true because some industrial people settled in big («fundamental») wintering places for tens of years. During the second half of XVII - beginning of XVIII centuries in the Lower Kolyma from those settled manufacturers and service class people a group of people began to establish, who considered to be the Kolyma groundlings, but in fact they were engaged with fishing and hunting. By the end of XVIIIth century peasantry was formed here consisted of those groundlings, rewritten into peasantry according to legislation of those times.



Pic.1. Plan of dwelling house excavation. The Lower Kolyma wintering place. 1989, 2010

In the XVIIth - beginning of the XVIIIth centuries chief role in formation and growth of Russian population in Yakutia played migrants from Russia and Siberia. Specialty of this northern region, in connection with central Yakutia, is considered to be the fact that in the second half of the XVIIIth century the main role in formation of Russian population was given to natural increase, which influence high level of crossbreeding of indigoes Russian peoples.

In such a way by the end of XVIII century a basis for investigated old-resident group was formed, who during next hundreds of years saved its entity, when practically not being refilled by new occupants because of extreme remoteness. In 1989-90s and in 2009-2011 archeological investigations of the Lower Kolyma wintering places, known in literature as Staduhinsky ostrog,

[5] Additions to historic Acts, T.4. SBR, 1857. Pp. 401-408.

built in 1655. In two building horizons dating back to the second half of the XVIIth - first half of the XVIIIth century stocks of housing and household buildings were studied, a unique collection of cultural artifacts was achieved.

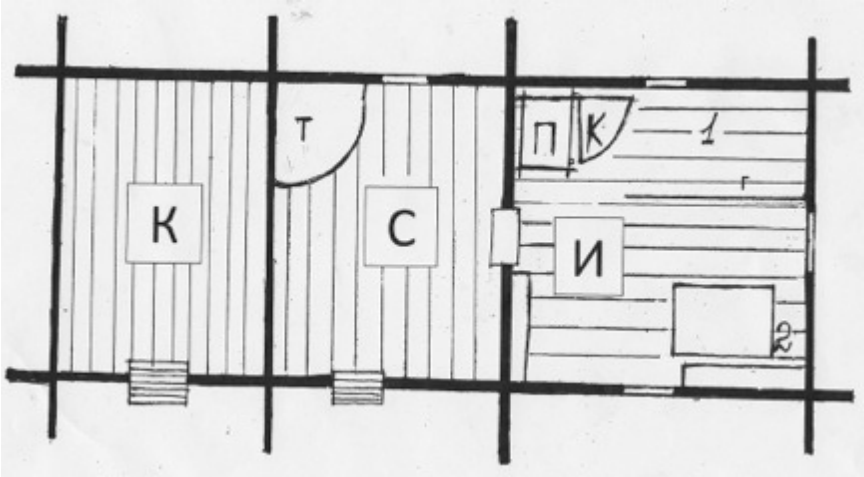
A housing building is represented by stocks of a three-part house, consisted of chopped «in seam» izba and klet', connected with seni, gathered in zaplot. Izba was heated by wattle-and-daub heating stove, and there was probably a fire-place in klet'. From outside the building was warmed with strong clay mound of earth, from the northern side terminated with log of wood, and from the eastern side, entering the yard, with horizontal raddle. Covering of a roof during a long period of time was reconstructed based on existed pictures of the Lower Kolyma pit, built 1769 as cockery. This theoretical reconstruction attained its acknowledgement when 2010 during excavation the whole saved batch was founded.

Pic. 2. Flux — one of main details of a building of nailless roof. The Lower Kolyma wintering place. 2011

In klet' it was probably later made chopped «in seam» household annex, which had mound of earth limited by short raddle. The second household annex stood separately and constituted a filling house made of thin logs of wood with clay mound of earth, limited by the same thin log of wood. Roof with four sloping surfaces was ruined during fire inside the building.

Analysis of construction and design techniques of dwelling and founded architecture details take us to the Russian North, where ternary form of buildings and practice of nailless roof technologies became perhaps symbolic.

Ethnographic material shows wonderful fundamental strength of construction technologies and safety of traditional dwelling design. All the respondent informers remembering house of their childhood told about ternary form of dwelling with characteristic inside design (Pic.3).



Pic. 3. Traditional dwelling of Kolyma peoples by the pic. of M.P.Olshanceva, 1929. И — izba. С — seny. К — klet'. Т — trivet. П — stove. К — fire-place. 1— zagrudka. 2 — red corner.

Saved in tundra of Kolyma hunters lodges, built in XIX - XXth centuries, demonstrate the same technique of construction, as founded during excavation buildings, but with some level of degradation. By later buildings corners of block houses are not structured, there is no cut over in log of wood, but two bean sticks are fixed; by the beginning of the XIXth century high roofs disappeared eventually and they were changed with plain land roof.

But two — «izba-seni», and even three-part «izba — seni — klet'» design of housing is still appears to be inviolable. It is subject to fishing houses also, which were built by fishing places or in hunting areas. Their construction and design found its complete analogs with houses of manufacturers-pomors, founded in Spitsbergen [8, p.411, pic. 2,3].

More exact location of cultural tradition gives search of artifacts analogs. In 2011 during archeological excavations of the Lower Kolyma wintering places in stratiform, dated back to the XVIIth century, a well preserved povoinik was found [7]. Construction of this artifact is interesting because from back along the ochel'e of head-dress it was sewed a roller made of tightly stranded red stuff, which above was sewed round the main material of article. It is interesting to know, that even today povoinik is considered to be the chief detail of women in Kolyma traditional costume, but in «cornette», as it is called nowadays, there is no roller. It also showed us degradation of of

traditions, as on the Russian North povoinik up to the XIXth century became as individual head-dress, the same as kokoshnik. Alike the founded povoinik with the roller was noted in the book of D.K.Zelyanin. When analyzing traditional women head-dresses, author pointed that this povoinik used to be a local tradition of Velikoustuzhskiy uezd of the Vologda county [9]. Another and again women article represents other local tradition.

In materials of the Lower Kolyma wintering place there are two pair of earrings-pigeons, made from bronze with settings of jewelry glass. Such earrings-pigeons have rase in Velikiy Novgorod and to the beginning of XVIIth century were extremely popular on the whole Russian North. At the picture earrings-pigeons are represented from the Lower Kolyma wintering place (to the right) and from the funds of Arkhangelsk museum of fine arts, made from patten brass (1).

Pic. 4. Earrings

Povoinik and earrings were selected for analysis as the most expressive articles. Other artifacts have either All-Russian or All-North-Russian character and don't fall for more predict location. Analyzed archeological and ethnographic materials lead us to the Russian North in the regions of Veliky Ustyug and Arkhangelsk.

Interesting results were shown during exploration of folklore. Among rich folklore heritage of old-residents of Yakutia arctic regions the most developed by researchers historical song about departure of Skopin-Shuisky. Enough number of song about Skopin-Shuisky variants let us create historical exploring, find out more ancient and search for parallel guides with other genres.

In the Lower Kolyma this song was registered number of times. Small by volume creation - only 26 poems, with refrain «red-green wine» after each line, was registered by Melikov in 1893 [10, p.53]. There are more later records of this song in Kolyma, presented in the book «Russian

epic poetry of the Far East Siberia» — [11, №330-334], in collected works «Contemporary Russian folklore of Siberia. Novosibirsk» [12, №177-205].

A well-known researcher of folklore Y.I.Smirnov generally very detailed describes this song, its ritual character and possibility of previous variants [11, p. 433]. As Y.I.Smirnov notes, song «was «sung as «home» wine (in comparison with «nadvorny» which was sung on the street near home)». Later he writes that the text itself «demonstrates sustainable safety» (ibid.). In the lyrics, recorded by E.P.Popov in 1905, Y.I.Smirnov marks another ambivalence of song's character: historical and eulogistic [11, p. 434]. T.S.Shentalskaya when overviewing epic compositions of the Lower Kolyma and Indigirka refers to traditional character of melodious performance of these compositions, «fact of epic song absorption by the sphere of ritual act» [13, p.48 - 53].

On the European part of Russia performance of epic creations as ritual or eulogistic «fact is locally specific, lock to location only in former Velikoustyug uezd (now the Vologda Region; (song of Skopin, «Falcon-ship») and in Vyatka («Falcon-ship»)» [13 ,p.53].

For studying of migration processes of Russian through the territory of Yakutia in the initial period of its exploration a data base was created, which included identifying information about inhabitants of its territory in 40-60s of the XVIIth century. Data were obtained from custom information, which contained data not only of migrants' belongings and paid by them taxes, but also data of where they arrived from and also often a route of their movement through the territory of the region [6].

Access let us find, among others, those service class men, manufacturers and merchants, who lived in the middle of the XVIIth century on the Lower Kolyma. Analysis of migrants according to the place of arrival gave following result.

Table 1

Distribution of Russian inhabitants of the Lower Kolyma in 40s of the XVIIth century by exit points

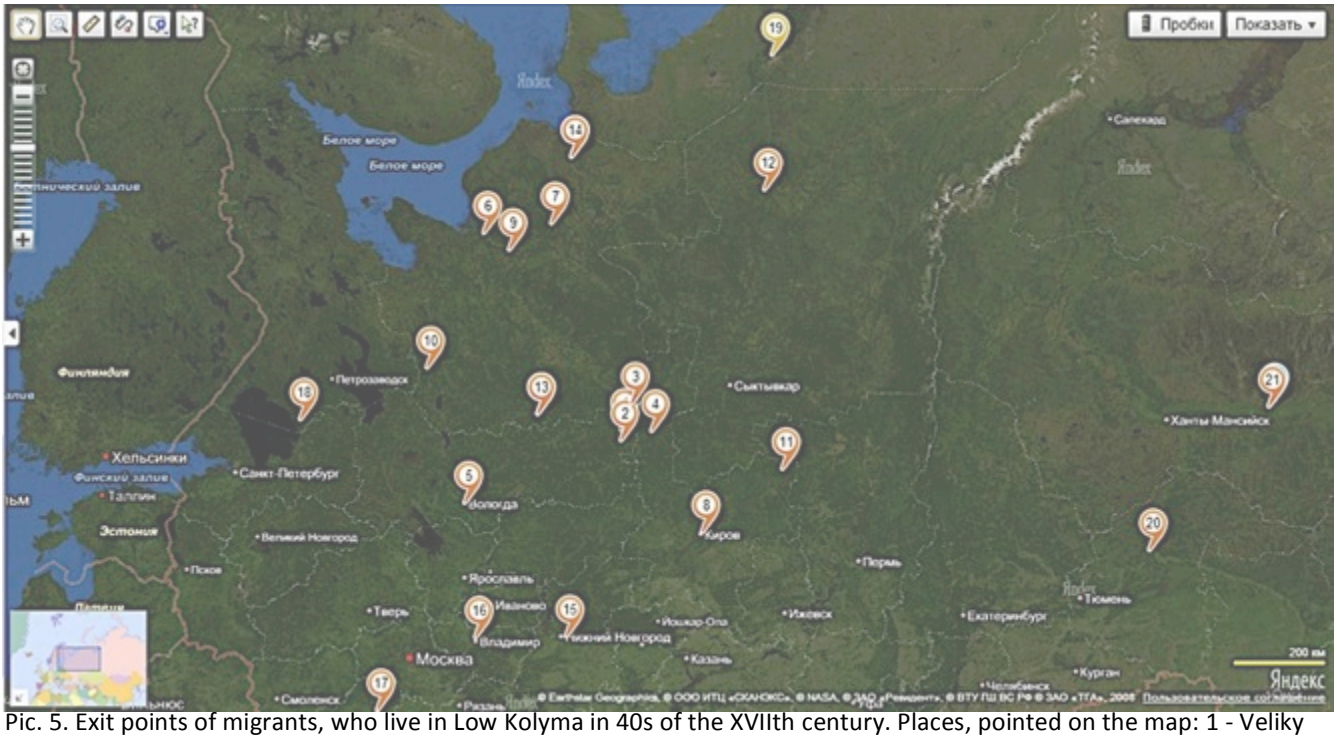
Exit point	%	Exit point	%
ustyuzhane	22	vyatchane	5
vazheniny	12	yuzhane	5
vichegzhane	10	holmogorcy	4
laletiny	7	nizhegorodcy	3
pinezhane	6	sysolyatiny	3

[6] Russian Record Office of ancient acts, f.1177, op.3, ch.5, d. 15, 39, 61, 65, 70, 74, 78-79, 126, 230,231, 261,366, 686, 739,770 and others.

vologzhane	5	others	13

In the category «others» we took 5 yakutian service class men and one yakutian manufacturer, who came from river Kokshenga, river Mezen', men from Surgut, Olonets, Ust'-Cilma, Karelia, Tobolsk, Kaigorod, Pustozer', Vladimir and Kaluga. Results of exit points are shown in pic.7. It is visible, that marks are grouped in two rather compact groups, first is in the region of Veliky Ustyug, the second in the region of Arkhangelsk.

In such a way, data of archeological, ethnographic and folklore investigations and written sources unexpectedly with one mind send the researcher to the Russian North, in the regions of Arkhangelsk and Veliky Ustyug.



Pic. 5. Exit points of migrants, who live in Low Kolyma in 40s of the XVIIth century. Places, pointed on the map: 1 - Veliky Ustyug. 2 — river Yug. 3 — river Vichegda. 4 — Lalsk. 5 — Vologda. 6 — Arkhangelsk. 7 — river Pinega. 8 — Vyatka. 9 — Cholmogory. 10 — Sysola. 11- Kaigorod. 12 — Ust'-Cilma. 13 — Kockshenga. 14 — Mezen. 15 — Nizhny Novgorod. 16 — Vladimir. 17 — Kaluga. 18 — Olonec. 19 - Pustozersk. 20 — Tobolsk. 21 — Surgut.

Problems of cultural unities' adaptation to new conditions of existence arouse great interest among researchers. But how can we appreciate direction of adaptation processes and the depth of happened changes without knowledge of original cultural tradition? That's why future fundamental researches as separate items and of the whole cultural tradition could help to transfer the problem of cultural adaptation of Russians in the north of Yakutia from the area of unrelated conversations to the sphere of concrete facts.

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ENVIRONMENTAL SCIENCE

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ECOLOGICAL PRE-IMAGE OF THE SYMBOL OF NORTHERN UNIVERSITY IN THE CONTEXT OF REGIONAL CULTURAL CODE

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Abstract. We investigate the preimage of ecological symbol of Northern University in the context of regional cultural code.

Keywords: *culture, symbol, zoosemiotics, north, Arkhangelsk region, Arctic*

Introduction

Creation of a positive image, choice of talisman, logotype, emblem and symbol in the context of regional cultural code has always been an actual problem for every university, wherever he was situated. Not long ago we were eyewitnesses of a public contest on choice of a symbol of one of the Northern universities - NArFU[1]. This important event points an active search of its «face» for the university, its correlation to mission, strategy and development program. We really want problems of humanitarian culture to become equal to organizational and technical problems. We will take the liberty overviewing semiotics of suggested future symbols of northern university in the context of regional cultural code.

Symbol of the university in the context of regional cultural code

One of the important issues for promoting of new organization on the market of educational services considers to be brand, which includes such definitions and structures as image, symbol, mark, logotype and emblem. From the listed before different categories, symbol plays some average role, at the same time being realistic, social figure and at the same time it captures the mission of organization in philosophical and world outlook categories. Symbol fulfills market service (here education) with «emotional content and even spiritual significance» [1, 2011]. Probably that's why organizers have chosen symbol as the subject of contest, which is considered to be strategically right, but tactically rather difficult.

[1] Talisman. URL: http://www.narfu.ru/university/about/symbols/ talisman (accessed 25.06.2014).

According to the modern points of view, it is characteristic for a symbol social significancy, emotional impression and polysemantic [2, pp. 991-1000]. Symbols, submitted for public competition in Arkhangelsk, borrowed from natural environment, are zoo-(anthropo-)morphous (bear, owl, squirrel in jacket) or characteristic for inanimate nature of the North (snowflake, iceberg, Polar lights). Answers to the question: «How you see the talisman of the NArFU?», for example, were distributed in following way: polar owl — 24%, northern lynx — 22%, golden squirrel — 21%, Eskimo dog — 13%, Husky dog — 6%, baby Seal – 3%, bear Umka – 2%. white bear — 2%, she-bear with bear-cub — 1%, iceberg — 1%, Northern lights — 1%, seagull — 1% , etc. [2]. A common stereotype of vision of a symbol (talisman) of the university as natural object understandable from the first view is evident. Among those of suggested, there is no abstract and multilayer «puzzles» and engineer-technical symbols, it means that from the organizers' (participants') points of view symbol must have, without doubt, an image of alive, habitual but difficult of assess subject matter, which can induce emotions, with unevident social significancy and minimum polysemantic. We think that the problem of content can be solved by cultural means, so, as one of variants of the university symbol can become an animal, for example, a Russian Blue Cat - Russian (Arkhangelsk) blue cat[3]. Symbol (cultural replicated figure) of this animal can be accompanied by positive, multilayer multiple culturography.

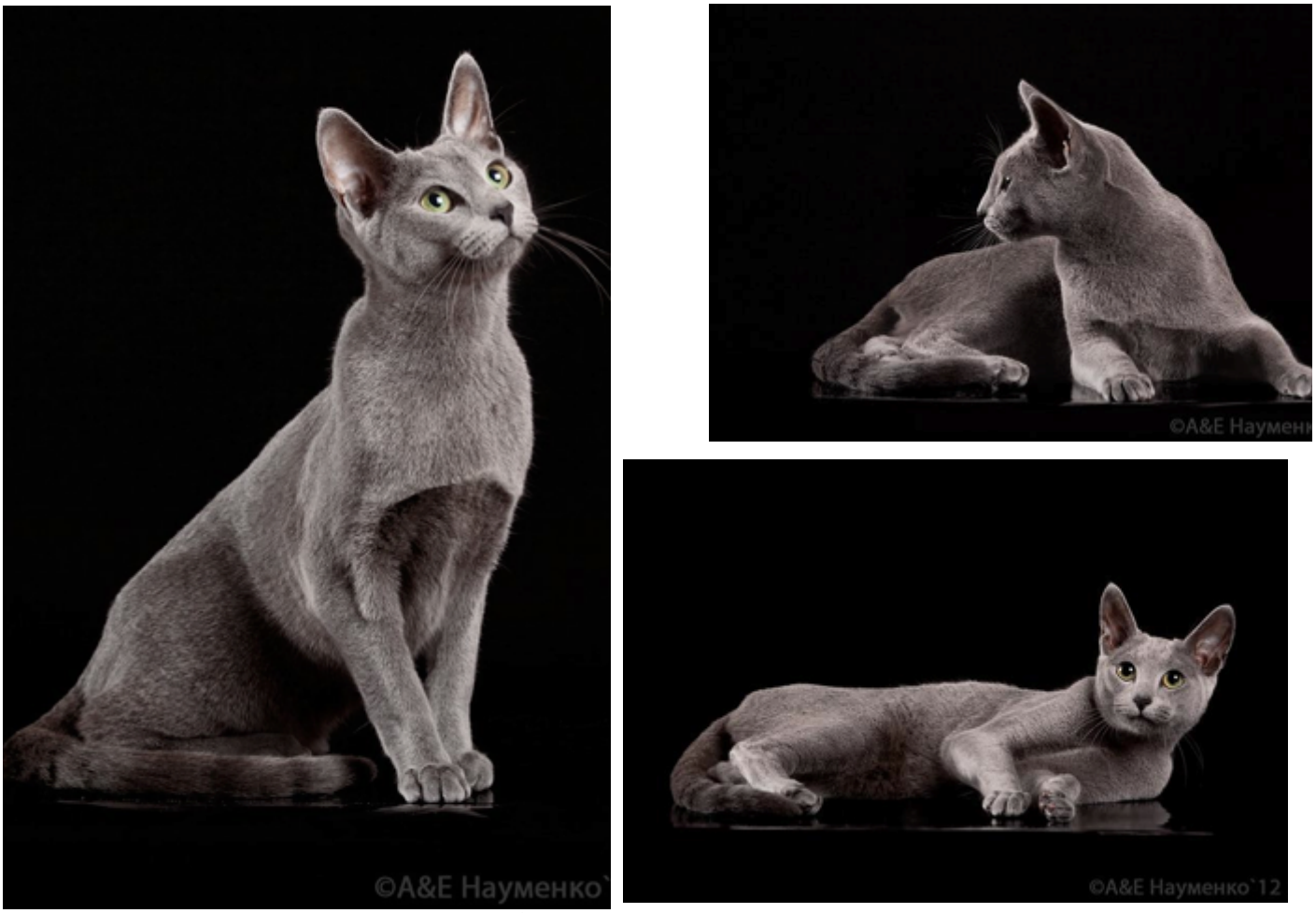
Let's start with patriotic context of adjective «Russian». Historically the origin, second name of breed — «Arkhangelsk» — is more authentic. Nowadays the word «Arkhangelsk» in the name of a breed must be defended the same as the reputation of Arkhangelsk - history of famous city-warrior, decent city-worker, first Arctic sea port of the Russian State. Specialists write: «Up to 1912 the first name of Russian short-haired cat: Arkhangelsk blue was preserved…Just in 1939 in Great Britain firstly appeared name Russian blue…In the middle of 80s of the XXth century back of Russian blue in Russia took place…modern Russian blue cat, cat from peasant farmsteads, who after years of wanderings came back to her motherland as finely cut and educated society lady and carried through times and hardships the mystery of the original charm of her ancestries» [2, 2002].

Breed of Russian blue cats is officially acknowledged in international organizations and really exists in Russia. In our region nowadays traditions of this cat's breeding are practically lost, and as well as the economy and culture of the region they are possible to be restored. Epithet

[2] Talisman. The same.

[3] Breed Standards of category III, Russian Blue // Breeds nomenclature FIFE. URL: http:// fifeweb.org/index.php (accessed 22.02.2014).

«Arkhangelsk» concerns not only one area, but the whole region, as distinct from analogous brands, such as «Mezen horse», «Cholmogory cow», «Pomorye» and others. Reference not to Russia, but to concrete region - Arkhangelsk - is appropriate here.



Pic.1. Russian blue cat. Photo for the article is given by guardian Alina Bogacheva. URL: http://graysland.ru. Photo: Elena and Alexey Naumenko.

Breed of Russian blue cats is officially acknowledged in international organizations and really exists in Russia. In our region nowadays traditions of this cat's breeding are practically lost, and as well as the economy and culture of the region they are possible to be restored. Epithet «Arkhangelsk» concerns not only one area, but the whole region, as distinct from analogous brands, such as «Mezen horse», «Cholmogory cow», «Pomorye» and others. Reference not to Russia, but to concrete region - Arkhangelsk - is appropriate here.

This breed was created by residents of Arkhangelsk last century from different breeds, which were taken by seamen to Arkhangelsk from the whole world, including well-known British. Russian (Arkhangelsk) blue cat nowadays - is an «intelligent smiling dear», freestanding, unlike

other breeds [3, 2008]. And at the same way Northern University, when absorbing the best European practice, must become independent, meaningful science-educational center of Russia.

This symbol (Arkhangelsk blue cat) would be unique, because, according to our information, it has never been used by any production in the history of region (in contrast to ship, fir, horse, berry and seal).

Marking of pure blue color (sea, sky) according to Standard must come up to bright eyes: «Color of eyes - bright-green (shining like diamonds, green as flood plains and taiga) and it must be no white patches - as it must be no patches in the history of universities and on reputation of the University. To breed this cat successfully can only specialists — at the same way organization of educational process must be charged only to professionals.

Even those, who doesn't like cats, admire their beauty, independence and mind. Cat can't be under control, as for dogs, but at the same way cat — is a domestic animal, but not wild as lynx. So Federal University is a social-oriented and at the same way emphatic autonomous institute.

We can't go by cats as by Eskimo dogs. Author wants to express perplexity on engaging of Husky and Samoyed (in presentation of the competition the last was pointed as just «Eskimo dog). According to FCI (Federal Cynological Association)[4] Standards, ancestry of Husky is for the USA (FCI-Standard N° 270/24. 01. 2000 / GB), speaking about other breed, Samoyed (FCI-Standard N°212 / 09. 01. 1999 / GB), it is written rather indefinitely «Origin: Northern Russia and Siberia. Patronage : Nordic Kennel Union (NKU)» [5]. Though, it is well-known, that ancestry of Samoyeds were taken from Novaya Zemlya, according to official version, Samoyeds originate from «Northern Russia and Siberia», and the first standard was adopted by the English one hundred years ago: «The name Samoyed derives from the Samoyed Tribes in Northern Russia and Siberia… The first standard was written in England in 1909».

In such a way, when overviewing the breed from the group of Eskimo dogs as the foretype of the Northern University's symbol, according to the author's point of view, Husky and Samoyed are not considered to be the prime choice, it is possible to find other challengers. For example, in the same standard speaking about traditional Russian Eskimo dogs - Russian-European Eskimo dog - in in

[4] Breed Standards of group 5, Spitz and Primitive types // Breeds nomenclature FCI. URL: http://fci.be/nomenclature.aspx (accessed 25.06.2014).

[5] «Origin: Northern Russia and Siberia. Patronage : Nordic Kennel Union (NKU)», which includes Norway, Denmark, Sweden, Finland and Iceland. Here and later — translation of original text according to version of official web-site RCF: Standards of dogs' breeds of the 5th group «Pomeranian dogs and other primitive breeds» //RCF Standards URL: http://rkf.org.ru/rkf/Standards/group5.html (accessed 22.02. 2014).

Standard of breed (FCI-Standard N° 304/02.03.2011/EN) it is directly noted: «This is a Russian breed of hunting dogs from the European forest areas of Russia. The first record about northern ear-pointed dogs was published by A. A. Shirinsky-Shikhmatov in the "Album of northern sledge dogs-laikas" in 1895… The breed was limited to the regions of Komi, Udmurtia, Arkhangelsk, Yaroslavl, Tver, Moscow and some other areas of Russia. In 1947 the off-spring of Arkhangelsk, Komi, Karelia, Votiatsk and other Laikas were united into one breed under the modern name of: — Russian-European Laika. The breed standard for Russian-European Laika as a purebred dog was approved in 1952». The very core, evidently, is not in formal bureaucratic frills - who, where and what for standardized different breeds of Laikas, but in fact how carelessly Russians give their native to foreigners, how frivolously they go for the history and reputation of their Motherland when searching the symbol-concept, disregarding their own achievements, for example native breeds.

Cat is a stayer, ubiquitous animal, in comparison with one of claimants upon symbol - white bear with its suburban habitat, which is restricted with area of polar ice dispersal. White bears, pushed closer to a person (in the zoo), are not so white, but a little yellow, with dirty belly and red paws. White bear - is one of the most dangerous predators in nature, it is practically impossible to be domesticated, it is nice only free between ice and far from people. And a cat welcomes everyone in warm and comfortable home so, as seamen and fishermen were usually waited on the Pomor side of the White sea. A home cat, unlike most of other animals, can be taken to the ship and start a voyage to the North Pole.

In the title of the university key words point at location and union-state meaning, but we, citizens of Arkhangelsk, speak for instance, «Our NArFU». Within our meaning it is so: «situated by us, in Arkhangelsk», «here study and work firstly residents of the Arkhangelsk region», «history of NArFU - is a practically one hundred-year common history of local universities». Image of a symbol, which includes elements of regional cultural code, — is a culture courtesy to the city, where the Federal university «was born» and «grew», a well-deserved demonstration of respect to its beautiful name, unchangeable during history, name-symbol and name-concept. How much we want to disappear such paradigmatic «cod-wood-boredom» or philosophic «Arkhangelsk - dead-end city … from the word dead end or dullness?» and came such new images as: «city with angel appearance», «region where is heaven and people like angels» or «cat as on the symbol of the Northern University».

Let's pay attention to the fact that cat is considered to be the only among all animals, except birds, who can live in orthodox churches, where it catches mice, saving good for people.

Benefits from cat are evident, unlike living somewhere on trees, faraway from people «wise» forest owl. Cat is artful and blistering, nice hunter («catches mice», means always in the swim), there is no meanness or underflows — unlike unexpectedly turning iceberg. Cats grow fast - it is not infant, growing bear cub. Cats can be of both genders — male and female cat, what can bring harmony to the symbolic image. Image of fertility is also interesting: «as cat» knowledges can multiply and spread around the earth «as kittens». Eventually, «Cat has nine lives», which suppose survival in all trouble situations, that's why cat genus will not disappear or exhale unlike snowflake.

Conclusion

Let's put the problem opened. Probably not all the consumers of educational service like cats; probably, Arkhangelsk blue cats haven't become an absolute value for natives of Arkhangelsk and its promotion is not necessary; anyway, there are many other variants of symbol. But how much we would like when living part of our own lives under the symbol go the Northern University, to be proud for our university, to see the perspective of its organization, through multiplicity game of signs to forestall the grandeur of designs.

Symbol for modern valuable for the region organization such as the Northern University, must be close and understandable in point of fact, artistically plain and unified, emotionally warm for all and semantically deep for those who work in the system of higher education, without any other marketing efforts.

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NON-SALINE MEADOWS AND GRASSLANDS IN THE KOLA PENINSULA

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Abstract. State of knowledge about non-saline meadows and grasslands in the Kola Peninsula is analyzed. Various approaches to study and descriptions of meadows and grasslands are observed.

Key words*: meadows, grasslands, alpine meadows, floodplain meadows, uncultivated grasslands, Kola Peninsula, classification of Braun-Blanquet, ecology of grasslands and meadows Vascular plants names accordingly with: Cherepanov, 1995*

Introduction

Meadows and grasslands attract attention of researchers for a long time. And their definitions were changing in the course of history of the vegetation science. At this moment the most complete definition is from T. A. Rabotnov [1, 1984]. He determined meadows as biogeocoenoses with more or less closed cover of grasses, perennial mesophytes, with winter pause or sharp decrease in growth due to temperature drop, and without summer depression in growth due to lack of water supply. A. P Shennikov divides meadow to glykophytic, or non-saline (without halophytes) and halophytic (with halophytes adapted to life in salinity of soil > 5%). Coastal meadows of the White and Barents Seas in the mouth of rivers constitute a specific zone of "Arctic maritime and floodplain meadows" [2, 1941].

This article presents the data on history and present state of knowledge about glycophytic (non-saline) meadows on the Kola Peninsula, taking into account that these plant communities are less studied than coastal halophytic meadows and marshes ([3, 2002], [4, 2008], [5, 2011], [6, 2012] et al.)

Geographical and climatic features of the Murmansk region which influence meadows distribution

The Murmansk region occupies the northeastern part of the Baltic shield composed by Precambrian crystalline rocks. Frequent outcrops of acidic granites and gneisses of the Archean or Proterozoic era are covered by shallow glacier moraine. Morainic deposits represent main soil-forming nutrient-poor parent rocks. Tectonic movements in the Proterozoic and Paleozoic era formed modern mountainous topography and determined characteristics of hydrology of the Murmansk region - most rivers flow on the bottoms of tectonic faults and fractures, often their flow includes large lakes.

Network of rivers and lakes of the Kola Peninsula is young. Alluvial deposition occur in the mouths of large rivers, they are represented by layered clays, sands and pebbles [7, 1977]. Most of the major rivers in the north of the Peninsula (Teriberka, Voronya, Kharlovka, Vostochnaja Litca, Iokanga, Lumbovka) have a narrow floodplain. Parts with quiet and rush flow alternate each other, numerous falls and cascades occur, and due to this features area of floodplain meadows is small. The lower flow of large rivers flowing to the White Sea (Varzuga, Ponoy, Umba) sometimes have well-developed floodplain. Estuaries of the rivers are filled with salt Sea water during high tides, and this influences the floodplain vegetation.

Climate of the Murmansk region is determined by position in the Atlantic-Arctic Climatic zone, with frequent inflow of warm air masses from the Atlantic Ocean and intense cyclonic activity. Climate of area is humid with a predominance of precipitation over evaporation due to moderate temperatures and high relative air humidity. Humid climate is an important factor in the formation of meadows and grasslands.

Zonal vegetation types on the Kola Peninsula include northern taiga, subarctic birch forest and tundra. Zonal types were formed about 7500 years ago, after glaciers retreat [8, 2009], [9, 2007].

The composition of rocks, the hydrographic network and relative youth of plant cover determine the small area covered by meadows and grassland and low proportion in plant cover of the Murmansk Province, compared with neighboring regions (such as Karelia and Arkhangelsk Region). But the diversity of meadows is high. Specific features of meadows in Murmansk region are resulted from their location at the northern limit of the riparian vegetation and in different natural zones in lowland and in mountains (from taiga to tundra). Although meadows represent a classic example of intrazonal communities but zonal position of non-saline meadows and grasslands determine their composition and structure.

Non-saline meadows and grasslands on the Kola Peninsula include shortgrass early snow-bed meadows in tundra zone in mountains, meadows of floodplain along rivers valleys, meadows

on the banks of lakes, coastal meadows on the high shores, secondary (abandoned agricultural, including seeded) grasslands, and ornithogenic meadows nearby bird colonies (Fig. 1). Natural up-

Fig. 1. Non-saline meadow communities in the Varzuga river valley (flood-plain meadows) with dominance of *Hedysarum arcticum* (left) and *Polemonium caeruleum* (right)

land meadows in the region are absent [10, 1983].

Modern abandoned agricultural grasslands are widespread near settlements, where they were established after forests cuttings and bog melioration followed by sowing of grasses. Low-land abandoned agricultural grasslands are situated in drained depressions and river valleys. Up-land meadows are situated on watersheds and near settlements. Small patches of shortgrass early snowbed meadows are widespread in tundra zone of mountains. They are characterized by high portion of tundra dwarf shrubs. Meadows of flood plain look like narrow strips along rivers or on river islands both in the forest and tundra zones [11, 2011]. They were used by villagers as pas-tures and hayfields. Now the area of this meadows and grasslands decreases and they persist only near the large settlements (Luvenga, Varzuga, Tchapoma, etc.). Meadows on the banks of the lakes have a limited distribution. This type of meadows must be differentiated from the grasses-dominated fens (mires). Coastal meadows on the high seashores occur on rocky, sandy, loamy and clayey shores of the White and Barents Seas. The most extensive they are in the mouths of large rivers on river alluvia and on the coastal terraces. Ornithogenic nitrophilous meadows occur on the rocks near birds' nests or colonies and are similar in composition with halophytic coastal meadows.

The typology and classification of meadows and grasslands

Meadows and grasslands is such a kind of vegetation where fundamental problems of geo-botany and phytocoenology were tested. Science about meadows and grasslands ('Lugovedenie')

arose as a science to solve specific problems of these plant communities, for example, the spatial structure of community, long-term and short-term dynamics, relationships between plants and layers of community and interactions with other components of the biogeocoenose (such as microbes and fauna). One of the fundamental issues of this science is typology and classification of meadows and grasslands. These plant communities don't have specific methods of classification. But each classification method applied to meadows and grassland vegetation had to solve special problems. The contradiction between the main purpose of classification and typology (to distinguish types of plant communities) and continual nature of spatial (horizontal) structure of floodplain meadows even resulted in denial of the validity of classification as a method of vegetation study. Leontij Ramenskyi (1884-1953) author of a theory of environmental coordination of meadows [12, 1956] thought that classification method isn't of use in continuously varying meadow plant cover.

At the beginning of 20 century Russian science about grasslands and meadows (lugovedenie) traditionally practiced a dominant approach to classification, with such basic units as formation and association. Soviet botanist Alexandr Shennikov (1888-1962) [2, p. 285-286] distinguished association basing on similar flora, structure and habitat (e.g., soil condition). For example, associations *Festucetum rubrae rhinanthosum*, *F. r leucanthemosum*, *F. r troliosum* and etc. The group of associations with similar dominants (edificators) were united in formation, i.e. - *Alopecureta pratensis*, *Parvoherbeta mixta* and etc.

Marianna Ramenskaya (1915-1991) [13, 1958] practiced ecological and phytocenotic classification of meadows and grasslands of Murmansk Region and Karelia. She considered meadow association as some group of phytocenoses with identical morphology, phytocenose structure and flora, and with common dominants and co-dominants (usually in number from 2 to 4). This species determine the structure of plant community and form a large part of biomass. Associations with dominance of one or several species form a formation (e.g., formations *Nardeta strictae*, *Agrosteta vulgaris* and *Humidiherbeta*. This classification was used some scientists who practiced dominant method.

Method of dominants together with composition of layers and synusiae and temporary edificators was in early- and mid last century the most common approach in the study of grassland in Russia [14, 1910], [15, 1928], [16, 1964]. But in meadows with several dominants, with seasonally and permanently changing composition of dominants, this approach led to the establishment of several different classification schemes which do not correspond to the real diversity of mead-

ows. This approach was useful only for classification of mono-dominant communities with constant composition - such as i.e. seashore marches.

In 20 century there was arisen Braun-Blanquet approach to classification in Central and Southern Europe, and after 1980ths has been widely distributed in Russia. Its advantages is use of floristic combination and diagnostic species for combining communities into associations and then arrange associations in the hierarchy. “Old” syntaxa can change their position and rank in the hierarchy, and new syntaxa can be introduced in existing scheme, etc. [17, 2012]. This method is widely used in meadows and grasslands. In Prodromuses (list of syntaxa) of European countries the part of communities with dominance of grasses and herbs is very significant. For example, in Prodromus of Russia [17, p. 377] unions of meadows, steppes, forest edges take approximately 20% of the total list. In Northern Europe associations of meadows, tundra meadows and clearings communities constitute 24% of the entire list of syntaxa [18, 1996], in the Prodromus of Czech Republic associations of steppe meadows, wet and dry meadows and forest edges communities account for about 25% of the list [19, 2003].

In the typology of vegetation In Fennoscandia (Finland, Norway) there is practiced ecoligical-and-dominant approach in classification of meadows. This method is based on the grouping of communities according to the environmental conditions of habitat, dominants and characteristic species [20, 1994], [21, 2003]. To characterize the community-type there is used diagnostic group of species as in method of Braun-Blanquet.

Modern classification of meadows and grasslands are based on mathematical methods (such as coordination and clustering) with use of special computer programs (TWINSPAN, Coctail, JUICE, Graphs, etc.). The results of such classifications are interpreted involving methodology of Braun-Blanquet or typology basing on habitats and species composition [17, P. 211].

History of the study meadow and grassland communities of the Murmansk region

Study of meadows and grasslands in the Murmansk region started in late XIX - early XX centuries. It was the time of first active botanical expeditions (including study of meadow and grasslands together with other plant communities) and first lists of vascular plants of Russian Lapland [22, 1864], [23, 1831], [24, 1882]. There were published some general reviews of the investigation of Murmansk Province vegetation, including seashore meadows [25, 1953], [26, 1981], [27, 2012].

K. Regel [28, 1922] presented the first descriptions of plant cover of Kola Peninsula including descriptions of coastal meadows, meadows of flood plain, early snowbed meadows in tundra zone in mountains. Descriptions were performed during field routes and contain only the most

dominant and characteristic species. It is difficult to compare them with present complete description of meadows and grasslands. For example, the association of Regel *Anthoxantho-Nardetum stricti* described in the alluvial terrace on the left bank of Varzuga includes only 7 species.

Yu. D. Zinserling [29, 1935] explored the eastern part of the Kola Peninsula (river valleys of Iokanga, Ponoy, Strelna, Pyalitsa, Lumbovka) from 1927 to 1928 and classified meadows and grasslands based on dominants and position of communities in landscape. Zinserling divided all non-saline meadows and grasslands on the Kola Peninsula to floodplain meadows, early snowbed meadows in tundra zone in mountains, upland meadows and paludified meadows. According Zinzerling, diversity of floodplain meadows is determined by geographic position of the river (whether the meadow lies on the area of the floodplain riverbed, in the middle part of a river terrace or on the slope of the eroded by water bank), by differences in the hydrology and the nature of alluvial processes, by differences of floodplain topography and human activities. So, running streams of the Kola Peninsula with narrow valleys and short-term flood have only terrace and riverbed zones. Such a meadows Zinserling has described along rivers Strelna, Iokanga and Ponoy.

Zinserling classified continental meadows of Northwestern Russia basing on the classification approach of V. N. Sukachev and distinguished three classes (meadows on poor soils, meadow on soils of average fertility and meadows on rich soils). These three classes were subdivided according to the level (gradient) of the soil moisture.

Early snowbed meadows occur only in the tundra of the Kola Peninsula, on well moistened slopes on the fine earth, often influenced by melting water from late-melting snow patches and permanent snow field, with good supply of water. The growing season starts here later compared to the surrounding tundra. Some grasses, like *Anthoxanthum alpinum, Nardus stricta*, herbs *Veratrum lobelianum*, *Trollius europaeus*, *Geranium silvaticum*, *Alchemilla spp., Viola biflora* etc. prevail here.

N. M. Savitch studied meadows and grasslands in the central and southern parts of the peninsula (floodplain meadows of rivers Tuloma and Kola, coastal meadows of Kandalaksha Bay and secondary grasslands along the railway from Kola to Kandalaksha) [30, 1926]. Savitch based of the dominant approach and described three formations and 11 associations on the base of species composition. So, grass-and-forbs formation included 4 associations: *Agrosticetum albae*, *Festucetum rubrae* on sandy soil, *Agroryretum repens* and *Elymusetum arenarius*. Formation of paludified meadows comprised associations *Caricetum norvegicae*, *Heleocharicetum palustris*, *Juncetum gerardi*, *Festucetum rubrae* on muddy substrate, *Calamagrosticetum neglectae, Caricetum salinae* and *Caricetum limosae*. The latter two associations were described on the shoreline of

Kandalaksha Bay and in the central parts of the Kola Peninsula. In the taiga zone Savitch described formation of forest meadows.

Some descriptions of the floodplain meadows were presented in the survey of reindeer pastures of Kola Peninsula [31, 1936]. There are following types: shortgrass early snowbed meadows in tundra zone, riverine meadows of "low level" and meadows on the middle terrace above the floodplain of rivers Nota, Lotta, Tuloma and other rivers of north-west part), antropogenous “continental meadows" located nearby fishers’ and Sami huts, secondary grasslands in areas after birch cutting and coastal meadows.

The monography of R. Kalella [32, 1939] contains the tables of descriptions and characteristics of communities with the dominance of herbaceous perennials on the Rybachiy (Fisher) peninsula, former Finnish territory. Herbal community on the Rybachiy were divided into following types: slope meadows, tall-grass meadows, alluvial meadows, paludified and riverbank meadows and grasslands, meadows on sandy substrates, marches, snowbed meadows with dwarf shrubs. Kalela noticed the narrow floodplains and thin alluvial deposits in valleys of small rivers of the Rybachiy Peninsula. Kalela divided alluvial meadows to following types: *Equisetum arvense-Wiese, Calamarostis neglecta-Wiese, Equisetum fluviatile-Wiese, Carex aquatilis-Wiese, Juncus filiformis-Wiese, Caltha palustris-Wiese, Ranunculus repens-Wiese, Petasites frigidus-Wiese, Filipendula ulmaria-Wiese, Ranunculus reptans-Soziation, Alopecurus aquatilis-Soziation, Subularia aquatica-Soziation, Carex vesicaria- and Carex lasiocarpa-Überschwemmungsmoor, Carex caespitosa-Zsombeck-Moor.*

M. L. Ramenskaya [13, p. 339] presented survey of main types of meadows of the Murmansk region comparing with meadows of Karelia. In the Murmansk region Ramenskaja described negligible small paludified meadows, small alluvial meadows (due to special hydrology and sand drifts on the banks of running rivers), grass-sedges and grass-forbs meadows and grasslands with *Deschampsia cespitosa*, *Phleum alpinum*, *Poa alpina* and *P. alpigena*, *Festuca rubra* and considerable part of arctic species. Ramenskaja considered shortgrass early snowbed meadows in tundra zone as a distinctive characteristic of the Kola Peninsula. Meadows of Murmansk region and Karelia are similar only in the coastal area.

There are not so much modern researches of non-saline meadows and grasslands of the Murmansk region. In the survey of secondary upland meadows on Varlamov Island in the Pasvik Reserve there were presented 7 formations of meadows and grasslands, together with species composition and dynamics [33, 2011]. Formations differ in the soil fertility, the number of vascular

plants and bryophytes and the coverage. So, nitrophilous tall grass community with the lowest number of species (8-15) and coverage 95-100% was described on the soils with high fertility.

Some data about successions and the impact of colonial birds on the coastal non-saline meadows (including brackish areas and floodplains) were presented in some modern studies [34, 1969], [35, 1981], [36, 1988]. Coastal meadows on the high seashores include some forest species (*Trientalis europaea* and *Chamaepericlymenum suecicum)*. Some halophytes are presented on high level meadows, which are influenced by salty sea water only during strong storms or high spring tides. I.P. Breslina [37, 1980] studied seashore grasslands and marshes and described association of *Festuca ovina* for sandy dry soils, and association of *Phalaroides arundinacea* with species of forbs and grasses in the lower layer on sandy alluvia on some islands and on the mainland coast.

Ornithogenic meadows in the White sea and Barents sea significantly different in species and general appearance from zonal vegetation. Primary ornithogenic meadows appear in areas with destroyed plant cover due to activity of colonies of birds (usually on coastal rocks). Ornithogenous vegetation on the White Sea islands [38, 1987], [39, 1965], [40, 1997] divided into three zones: the lower belt of coastal cliffs with a few halophytes; zone of peat accumulation and the formation of ribbon-like tufts with dominance of *Puccinella pulvinata*; ribbon-like turfs of middle zone with a predominance of clumps of *Tripleurospermum hookeri*, *Cochlearia arctica*, *Rumex pseudonatronatus*, *Sonchus humilis*, grasses *Festuca rubra*, *Poa alpigena*, *Agrostis straminea*, *Calamagrostis lapponica*, etc. Vegetation on cliffs of Eastern Murman hasn't clear zonal subdivision, there took dominance *Cochlearia officinalis*, *Tripleurospermum hookeri* and *Festuca rubra* spp. *arenaria*.

Fig.2. Coastal meadows on the high shores during flow (Kandalaksha Bay)

Secondary ornithogenic vegetation substitutes dry peatlands with dominance of *Empetrum hermaphroditum* or any other tundra vegetation under influence of nesting seabirds or follows to the primary ornithogenic vegetation. Groups of *Cochlearia officinalis* together with some other 'specialists' grow on the islands of the Eastern Murman and gradually substitute *Empetrum hermaphroditum* and other tundra dwarf shrubs. *Junperus sibirica*, *Vaccinium ulinginosum*, *Sedum acre, Festuca rubra, F. ovina, Poa alpine, Leymus arenarius*, etc. dominated on the islands of the Kandalaksha bay on these secondary ornithogenic meadows [38, 1987].

V. B. Golub and D. D. Sokolov [41, 1998] analyzed data on coastal plant communities in Western Europe and the European part of the former USSR using the method of Braun-Blanquet. Non-saline meadows with prevailing herbaceous perennials on the shores of the White and Barents seas were attributed to 5 classes: *Phragmiti-Magnocaricetea* Klika in Klika et Novak in 1941 (which combines hygrophytic communities on pond banks with fresh, brackish or salt water), *Molinio-Arrhenatheretea* R.Tx. 1937 (non-saline communities of perennial herbaceous plants with mainly anthropogenic origin), *Filipendulo-Convolvuletea* Gehu et Gehu-Frank 1987 (tall-grass nitrophytc and hygroophytic communities with a high proportion of broad-leaf herbs), *Crithmo-Staticetea* Br.-Bl. 1947 (hazmophytic vegetation on rocks under influence of salty sea spray and aerosols), *Honckenyo-Elymetea arenari*i R. Tx. 1966 (communities on sand dunes and sand drifts with dominance of *Leymus arenarius*).

Coastal communities, including non-saline meadow, were characterized in the process of analysis of local floras of the Russian European North ((including the eastern part of the Barents coast of the Kola Peninsula) by S.V. Chinenko [42, 2008]. Chinenko described the position of communities in the landscape, the size of phytocoenoses, composition of vascular plants, their occurrence and abundance, for coastal meadows on the sandy beaches (psammophytic meadows) and stony beaches (petrophytic meadows).

The rare in the Murmansk Region brackish communities were preliminary related to the alliance *Nanocyperion flavescentis* Koch 1926 (class *Isoëto-Nanojuncetea* Br.-Bl. et Tx. 1943) as a result of ecological-floristic classification in the estuary of river Lavna, on the coast of the Barents Sea [43, 2011]. Following types of communities were described: *Agrostis stolonifera - Calliergon cordifolium, Callitriche palustris - Limosella aquatica* and *Zannichellia palustris - Callitriche palustris* (rare in the area), *Eleocharis uniglumis - Callitriche palustris* Communities included Red Data Book species and were considered as value habitats.

Meadows (mainly coastal meadows) as value types of habitats which include species of The Red Data list were considered during the GAP-analyses of valuable natural areas in Northwest Russia [11, p. 101]. Value non-saline meadows with high biodiversity are rare in the north of the North-West of Russia and include regional Red Data Book species such as *Armeria scabra*, *Thymus subarcticus* (on dry coastal meadows), *Ligularia sibirica* (on coastal meadows on the high shores), *Valeriana capitata, Tanacetum bipinnatum* (meadows of Murmansk Coast), *Saxifraga hieracifolia* and *Castilleja lapponica* (shortgrass early snowbed meadows in tundra zone in Lovozero Mountains), *Alchemilla alpina* (meadows of Rybachii Peninsula), *Polemonium boreale*, *Hedysarum arcticum* (floodplain meadows of Terskiy Coast).

Conclusion

Development of research of meadows and grasslands in Murmansk Province there were practiced different approaches, various definitions of the meadow community as an object of classification, and changing approaches to classification - from individual associations and formations based on dominants trait to the vegetation surveys with a wide geographical and territorial coverage on the base of ecology and flora. It reflects a paradigm shift that is characteristic for the development of the science of vegetation in the XX century. Despite the fact that the natural and geographical conditions of the Murmansk region does not favor the formation of large meadows and grasslands, their diversity and specificity are very high, but the level of knowledge about meadows and grasslands on their northern limit is clearly insufficient, and main researches were carried out in the 30th of the last century. Currently, the main directions of investigations in the meadows of the Murmansk region will be study of the flora and typology of meadows and grasslands, their ecology and production process and the cycle of elements. It is necessary to estimate their total area and biodiversity, to analyze geographic variation of meadow and grassland communities at the northern limit of the range and to identify their position in the circumpolar Arctic.

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Polar-Alpine botanical garden-institute named after N.A.Aurorin of the Kola scientific center of Russian Academy of Sciences. URL: http://www.pabgi.ru/photo/pan.jpg; http://www.pabgi.ru/lapin.html

REVIEW

UDK 551.5 / 551.46

"RUSSIAN POLAR RESEARCHES" — INFORMATION-ANALYTICAL COLLECTION OF "ARCTIC AND ANTARCTIC RESEARCH INSTITUTE" OF OSHYDROMET

© ***Shepelev*** *Evgeny Aleksandrovich, editor of the electronic scientific journal "Arctic and North". E-mail: evgeny.north@yandex.ru*

Abstract. This note presents the leading Russian periodical which covers the researches of the polar regions. Information regarding its subject area, structure, and features is given.

Keywords: *Arctic, Antarctic, Russia, Information-Analytical Collection, Polar researches*

Information-analytical collection «Russian Polar researches» is being published since 2010. It continues and develops a bulletin «News of IPY 2007/08, which was published 2007-2010 and reflected main stages of science-research works, which were carried out by Russian scientists during International Polar Year 2007/08.

A senior-editor of publication is Alexander Ivanovich Danilov, candidate of Physical and Mathematical sciences, assistant director on scientific works in State scientific center «Arctic and Antarctic Research Institute». A deputy chief editor - Victor Georgievich Dmitriev, candidate of Technical sciences, academic secretary of AARI and Honored Scientist of the RF. A state institution «Arctic and Antarctic Research Institute» (SI AARI) belongs to Russian Federal Service for Hydrometeorology and Environmental Monitoring (Rosgydromet) and is considered to be the only appeared in Russia research institute, which provides complex monitoring of the Earth polar regions[1].

Firstly publication was planned to be published twice a year and 2010 it was really published two issues. But the growing interest to Arctic and Antarctic and still continuing growth of understanding of polar researches' importance led to the situation that by the year 2011 there were already 4 issues of this collection of publications. To the moment of this article's writing, the latest issue was №1 (15), 2014, published in March. The next issue is planned to be published in June 2014. Readership of this issue is rather wide, and its publications meant for both specialists,

[1] State scientific center «Arctic and Antarctic Research Institute» — leader of Russian polar science / Frolov I.E., Danilov A.I., Dmitriev V.G., Gerasimova T.M. URL: http://www.aari. nw.ru/main.php?lg=0 (accessed 03.07.2014).

whose challenge is to investigate polar regions, and for just those, who are interested in all happening in Arctic and Antarctic.

With development of the issue, structure of its sections changes, but the whole direction of it is unchangeable: it is firstly publication of materials about scientific researches of territories and water zones, information about development of Arctic and Antarctic and cross-lights of international collaboration. Such a variety provides in much that the issue is interesting for wide audience — for each who is interested in studying and development of polar regions could find an interesting material for himself.

Currently a number of main sections are pointed, which content is overviewed later. In the section «Official chronicle» data on adoptions of statutory instruments which are connected with

polar regions of the Earth are published. In such a way, in № 3 (9), 2012 it is noted about signing of a number of decrees by V.V.Putin and also of a law on creation of The Northern Sea route administration.

«On the front burner interview» presents a conversation with a scientist or a politician, top-manager of organization on polar researches. For example, in the interview with chief specialist of SSC «AARI» L.A.Timohov, published in № 3 (13), 2013 a history and modern condition of Russian-German researches of Laptev Sea system. In № 1 (15), 2014, an interview with executive director of OAO «Sevmorgeo» M.Y.Shkatov on one of the most urgent topics of Arctic explorations nowadays: «Realization of new great projects demands for key investments» is published.

«Exploration of polar regions» — is probably considered to be the most extensional section, which publish unique research materials, «straight from the horse mouth» so to say, on development and results of scientific expeditions in Arctic and Antarctic. In № 1 (15), 2014, for example, are published articles of V.G.Dmitriev «Problems of hydrometeorological provision of environmental management and ecological safety of the Russian Federation Arctic zone», V.F.Radionov «Sooty aerosol in Arctic», A.A.Piskun «From the history of Antarctic lake Radok explorations» and others. «Development of the Arctic region» tells about usage of Arctic natural resources and hold of particular activities and others.

In the section «New technologies and equipment» new technical decisions are described, which are used by research and exploration of polar regions. Section «Conferences, meetings, sessions» give a short overview of scientific and social activities' results. In the section «International correlation» problems of interconnection on the state level and on the level of international organizations on questions of Polar regions' study and research are overviewed. When taking into account importance of international correlation in polar regions, importance of materials, given in this section is difficult to overestimate.

«Dates» — here messages on anniversaries of one or another important events in the history of Arctic and Antarctic exploration, research organizations and famous scientists are put. The section «Brief news» contains chronological monitoring with Russian and international polar researches. Reviewing this section gives an opportunity to get some idea of everything taking place in polar regions nowadays. These two sections on data and news and other published materials in point of fact create an information scientific base, which can be relatively called as «historical chronograph of polar researches» of past ages and modernity.

In information-analytical collections and other headings are noticed, purposeful thematic issues appear. In such a way, one-third of a volume №4 (10), 2012 occupies a section «Yamal-Arctic 2012» dedicated to cognominal expedition. It dedicated opening speech of YNAA governor, interview and 10 scientific articles.

Volume of information-analytical collection — from 50 to 70 pages, its circulation is 400 numbers. We would like to mention qualified printing trades and abundance of valuable illustrations. Many photos are or great artistic value. In soft form in PDF all the publications can be found on official web-site of SI «AARI» by reference URL: http:// www.aari.ru/main.php?lg=0 (section «Publishing activities» --> «Russian Polar researches»). All PDF issues are published on the official web-site over time of printing version publication.

It is worth noticing, that SI «AARI» suggests authors to buy their scientific and science-popular printing issues. Following literature is possible for order: overviewed in this article information-analytical collection «Russian Polar researches», journal «Problems of Arctic and Antarctic», works of different scientific conferences, hydrometeorological reviews, information bulletins, monographs and other issues on polar themes. All these materials in common are of a great value for those, who systematically study polar regions of the Earth.

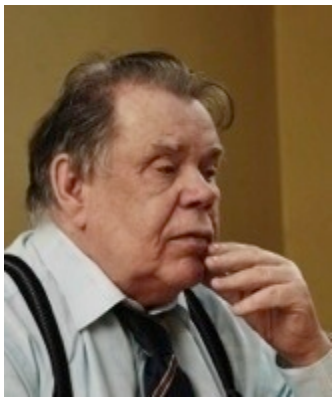
To get acquainted with the whole list of possible for order issues and to get known how to place and honor an order you can on the web-site of SI «AARI» (URL: http://www.aari.ru/main.php) in section «Publishing activities».

Editorial staff of electronic scientific journal «Arctic and North» wishes chief editor of information-analytical collection «Russian Polar researches» Aleksander Ivanovich Danilov and his colleagues creative success in coverage of events, connected with research and development of polar regions of the Earth, live and activity of SI «AARI».

Arctic and North. 2014. N 16

UDK 392 (470.21)

THE HISTORICAL STUDY ABOUT CULTURAL LANDSCAPES OF THE KOLA NORTH



© ***Kiselyov*** *Aleksey Alekseevich*, *Doctor of Historical Sciences, Professor, leading researcher of Murmansk State Humanities University. Tel.: (8152) 21-38-39. E-mail: science@mspu.edu.ru*

Abstract. The article represents a short review of the new book by prof. P.V. Fedorov «Cultural Landscapes of the Kola North: Structure and Historical Dynamics».

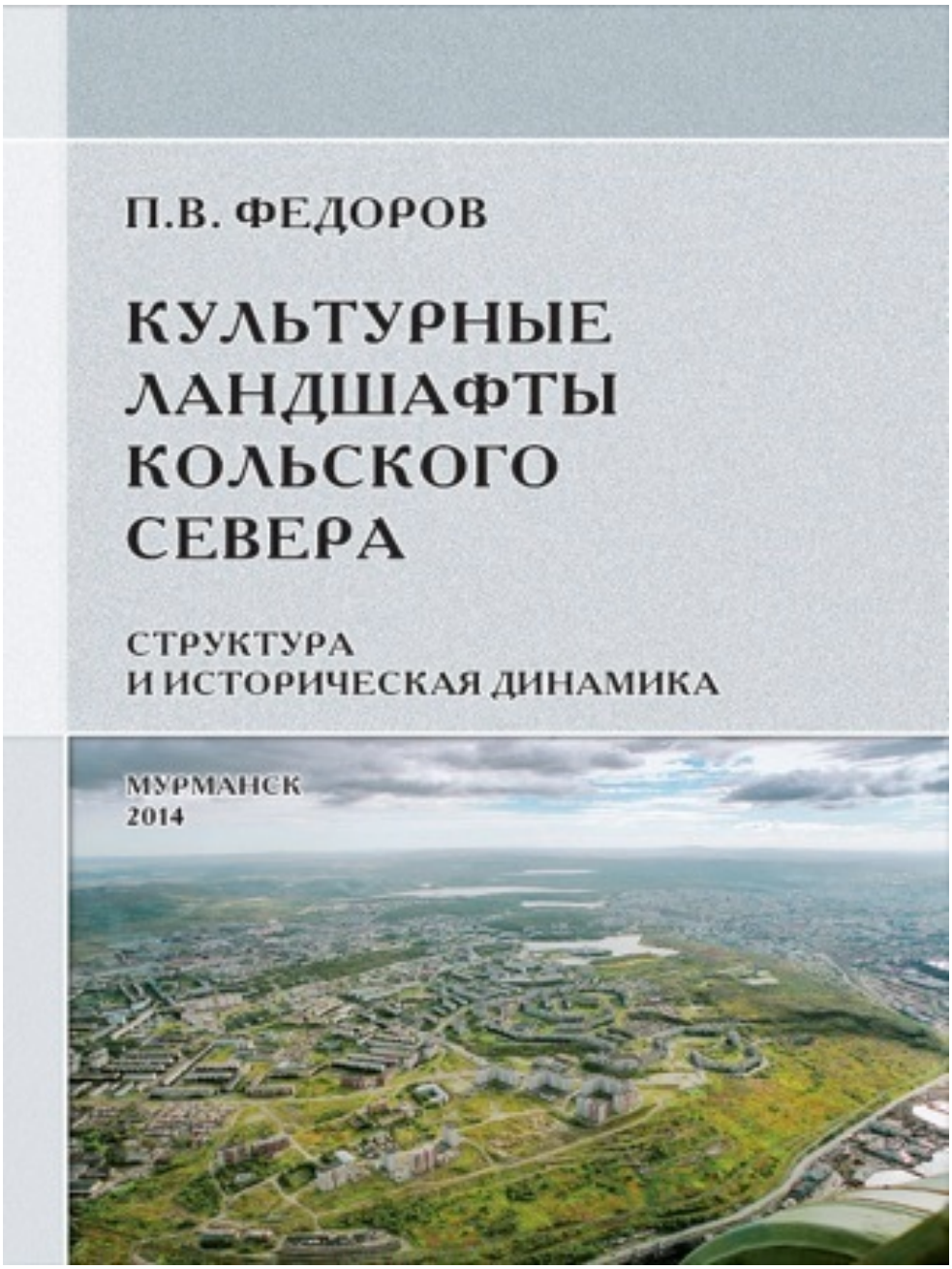
Keywords: *colonization, Arctic, Russia, North, urbanization*

In 2014 by the Murmansk State Humanitarian University and publishing printing plant «Pravda Severa» a new monograph of P.V.Feodorov, doctor of historical sciences, professor «Cultural landscapes of the Kola North: structure and historical dynamic» was published [1].

P.V.Feodorov, my most prominent pupil, who became acknowledged, great scientist-historian, who studied the history of the Kola North, published small number of books, each of what is considered to be a noticeable contribution to the Kola regional studies. In this way he is a successor of Ivan Feodorovich Ushakov's affairs.

Now there is more than one hundred of serious scientific works by P.V.Feodorov, including such monographs as «Northern vector in Russian history: center and the Kola polar region in XVI-XX centuries» [2] and «Historic regional studies when searching for other history of Russia (based on materials of the Kola peninsula)» [3]. His scientific interests are wide: not just history of the Murmansk region, but of the whole European north, historical anthropology, ethnography, historiography. Pavel Victorovich Feodorov was two times (2006 and 2011) laureate of contest of monographs and scientific works, focused on socio-economic and innovational development of the Murmansk region; for two times was award winner of the All-Russian contest in the field of achivistics, records management and archaeography, provided by Federal Agency of Records.

New book «Cultural landscapes of the Kola North: structure and historical dynamics» — is not just a history of our region, but analysis of dynamics of the Kola North landscapes' development over the course of history. Author overviews a historic process, which took place on the Russian North, in the light of changing landscape text and according to it he enlightens the history of one of the Arctic zone's territory exploration.



In Foreword it is said: «Russia is justly called a great northern country, arctic empire. By prominent discoveries, made on the North, Russia went down in the world history.

At the back of scientific achievements, heroical campaigns and expeditions the contribution is noticeable, which was made by everyday labor of many generations of Russians, who lived on the north. Russia was the first country who realized in arctic area different lifestyles, from archaistic and traditional to urbanized» [1, p.4].

Monograph is not lack of polemic and discussions from the first pages, where author suggests such terms as «colonization» and «reclamation», and here I agree with Feodorov that «the term — reclamation has much more broad context, than the term — colonization» [1, p.5].

And then author tells about his intention — to try to understand the phenomena of the Kola North exploration through the overviewing of the structure and historic dynamic of its cultural landscapes. But what means cultural landscape? In the Dictionary of foreign words we read: «Landscape (germ. Landschaft) — 1) common view of locality; 2) picture, which depicts environment…» [4]. Then the definition «geographical landscape» is explained. And there is nothing of cultural landscape. We'll try to manage with this definition. Let's view in the dictionary again: «Culture — generally — everything created by society thanks to physical and mental labor of people». It comes out, that definition of «cultural landscape» includes everything, created for centuries on the Kola North. These are cities and factories, ships and ports, connection and transport , etc. But how it all appeared and was created - about it there is a chapter in the book called «Structure and historical dynamics».

P.V.Feodorov considers development of this problem to be important not only in concrete-historic but in common-scientific terms. Firstly, from the point of view of the textual theory. Secondly, North, with it's relatively late colonization, gives an opportunity to reconstruct the process of territorial society formation. Thirdly, a comparative analysis of the Arctic zone investigation and estimation of its historical heritage will be necessary for detailing and correcting of modern social processes and strategies on the northern territories of Russia.

In the first chapter — «Cultural landscape and its texts» — author studies three problems: «Plain air — text and verbal texts», «Landscape in reflected texts» and «Cultural landscape: from texts to metatext».

In the second chapter, named «Cultural landscapes of the Kola North in historical dynamics», there are three section: 1) «Traditional landscapes of the Kola North»; 2) «Infrastructural shifts. Sophistication of the Kola North cultural landscapes in the net of the XIXth - first half of the XXth centuries» and 3) «Urban genesis and landscape transformation on the Cola North (1931 г. – …)».

In this chapter, which occupies three fourth of the book all the main positions of author are developed: pralandscape and burial grounds, monasteries and trading quarters, fishing places and landings, population growth and development of productions, transport and connection up to building of Murmansk railroad and foundation of Murmansk.

Author rightly suggests, that «traditional landscapes of the Kola North didn't possess something monolithic and permanent». It's impossible not to agree with other conclusion of P.V.Feodorov, that «Russian village landscape penetrated into Russian North spasmodic, from the South to the North» [1, p.47].

Let's take one more conclusion of the author «During 400 years of joint location (word is not so appropriate. — *A.K.*) with each other (XVI — XIXth centuries) nothing threatened position of traditional landscapes. No one type of traditional landscape didn't disappear during this time from the territory of the Kola North…» [1, p.48].

Monograph of P.V.Feodorov is based on solid historical, statistical, geographical, ethnographical, literature, archive and other sources.

Text matter is fleshed out with photos, maps and diagrams. Book was published hardcover, got up in accordance with content of monograph.

It is good, that author vouches each important state of his research with source reference - archive, book or article. All illustrations have not just title (text), but also pointing, where they were borrowed from. Author used works of not only Russian, including Murmansk, but also foreign authors (P.Nilsen, I.Astrup and others).

Not throwing cold water on such terms as «colonization» and «reclamation», a reviewer would just like to underline, that the first characterizes more exterior of society activity (acquisition of new territories, their inclusion to culture of more socialized population etc.), and the process of reclamation targets centuries-long follow-up work.

In monograph, except the author's text (109 pages), there are three important, valuable and interesting supplements:

1) 11 texts with description of Lopar burial ground, landings and colonies of Murmansk shore, Trifono-Pechenga monastery and Lebedev's (from essay of a writer V.V.Lebedev) description of Murmansk in 1929;
2) Data of the Kola North population census from 1926 to 2010;
3) References (more than 150 items).

From editorial stuff. From editorial stuff of the scientific journal «Arctic and North» we would like to add, that monograph of professor P.V.Feodorov, member of our journal's editorial board, greatly contributes to the systematical research of ethnocultural landscape, arctic artifacts, regional context of «Arctic culture» in the most enlarged sense of of this concept. Opportunities for providing of comparative analysis of Arctic and northern ethnocultural landscapes appear, when paying attention the fact, that the Kola North fully includes the Russian Federation Arctic zone. We congratulate Pavel Viktorovich with publication of a new monograph and wish future creative achievements in scientific field at positions of chief research worker of

President library named after B.N.EYeltsin, head of the laboratory of geocultural researches and developments of International bank institute (Saint-Petersburg).

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SUMMARY

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ABSTRACTS, KEYWORDS

© Balova M.B., Shilova N.A. Identification of the Optimal Conditions for Functioning of the Arctic Marine Services Market

Abstract. The article analyzes the prerequisites for the development of the Arctic sea-market service, the main stages in the modernization of infrastructure of the Arctic transport system, as well as barriers to the exploitation of the Northern Sea Route.

Keywords: *Arctic, Strategy of development, Northern Sea Route, management model, optimum conditions.*

© Zuevskaya A.P. Formation of oil and gas clusters and special economic zon in the European Russian Arctic

Abstract. This article discusses the formation of oil and gas clusters in the European Russian Arctic, the Port special economic zone in Murmansk and the possibility of establishing an oil special economic zone, a balanced participation of the stakeholders.

Keywords: *Russian Arctic, shelf, oil and gas,* clusters, *exclusive economic zone, stakeholders*

© Inieva N.S. Problems of Rational Island Management in the Arctic

Abstract. This article reports on the main environmental challenges for northern insular territories. Here you can find the national approaches to these problems, with possibilities of regional cooperation in universal island policy implementation with regard to ecological limitations being specified.

Keywords: *Arctic islands, island territory, regional policy, efficient island exploitation, regional cooperation, regional policy, northern is-lands, sustainable development.*

© Koptseva N.P. On the Question of Public Policy in the Field of Language Preservation of the Indigenous Peoples of the North

Abstract. Indigenous languages of Krasnoyarsk region, which are at risk of extinction to the maximum extent, are identified. Conclusion on the need to adopt a series of legal documents for the preservation of the languages of indigenous peoples of the North, Siberia and the Far East is justified.

Keywords: *Northern and Arctic territories, smaller indigenous peoples of the North, state cultural policy, language policy, Krasnoyarsk Region, Canada.*

© Lukin Y.F. Modern Situation in the Arctic in the Context of Global Trends

Abstract. Analyzes the modern situation in the Arctic in the context of geopolitical trends of the XXI century, the changes in International Relations after the return of the Crimea to Russia, the growing influence of China

Keywords: *Arctic, Russia, China, geopolitics, trends, challenges, U.S. intelligence report (2012), Crimea*

© Sushko O.P. Labor Potential of the Russian Arctic

Abstract. Demographic and migratory processes are analyzed, as well as the effect of low life level on the development of labor potential of the regions of the Russian Arctic

Keywords: *regions, Arctic, North, processes, labor potential, resources, demography, migration, standard of living*

© Astakhova I.S. The Interaction of the Regional Government and Indigenous Peoples: the Role of the Scientific Community of Yakutia (80s – Early 90s of the 20th Century)

Abstract: The role of scientific institutions and individual scientists of Yakutia in establishing the relationships between the government and the indigenous peoples of the North is shown. The scientific community has not only identified the main challenges the people of the North face, but also presented possible solutions.

Keywords: indigenous peoples of the North, Yakutia, regional policy, scientific community

© Ievlev A.A. The Ukhta Expedition of the OGPU: the Start of Industrial Exploration of Mineral Resources of the Pechora Region

Abstract. The reasons of sending special expedition of the OGPU in 1929 to the Ukhta-river are analyzed. The main factor of sending the expedition was the reform of the penitentiary system of the USSR and transition to use of compulsory labor of prisoners.

Keywords: Pechora region, Ukhta expedition of the OGPU, colonization of the North, industrial development of the North

© Konstantinov A.S. Migratory Processes in the Conditions of Transformation of Territorial and Settlement Structure in the Arkhangelsk region (1926-1989)

Abstract. Some results of studying the question of migratory behavior of the population in the conditions of transformation of territorial and settlement structure in the Arkhangelsk region during the period between population censuses of 1926-1989 are presented in the article.

Keywords: *census, population, migration, transformation, territorial settlement structure, region*

© Stas' I.N. Towns or Hotels? Gas Workers Towns' Construction Issue in Yamalo-Nenets Autonomous Area in the Late 1960s

Abstract. In this article the formation of the urbanized region of the north of the West Siberia is analyzed on the basis of the conference materials on urban development in the gas-bearing areas of the Tyumen region in 1968.

Keywords: *external, internal, centralized resettlement; urban planning development, West-Siberian oil-and-gas complex, urbanization.*

© Strogova E.A. Origins of Cultural Traditions of Russian Old-time Residents of the Lower Kolyma

Abstract: This paper presents the preliminary results of a comprehensive study aimed at clarifying the origin of the local group Russian old residence in Nizhekolymskiy region of Republic of Sakha (Yakutia). Analysis of archaeological, ethnographic and folklore materials and data of written sources revealed that cultural traditions of this group originate from Velikiy Ustiug and Arkhangelsk regions.

Keywords: *Arctic, Russians, traditional culture, historical ethnography*, *comparative analysis*

© Bobyleva N.I. Ecological Preimage of the Symbol of Northern University in the context of Regional Cultural Code

Abstract. We investigate the preimage of ecological symbol of Northern University in the context of regional cultural code.

Keywords: *culture, code, symbol, zoosemiotics, north, Arkhangelsk region, Arctic*

© Kopeina E.I., Korolyova N.E. Non-saline Meadows and Grasslands in the Kola Peninsula

Abstract. State of knowledge about non-saline meadows and grasslands in the Kola Peninsula is analyzed. Various approaches to study and descriptions of meadows and grasslands are considered.

Keywords: *meadows, grasslands, alpine meadows, floodplain meadows, uncultivated grasslands, Kola Peninsula, classification of Braun-Blanquet, ecology of grasslands and meadows*

© Shepelev E.A. “Russian Polar Researches” — Information-Analytical Collection of “Arctic and Antarctic Research Institute” of Roshydromet

Abstract. This note presents the leading Russian periodical which covers the researches of the polar regions. Information regarding its subject area, structure, and features is given.

Keywords: *Arctic, Antarctic, Russia, Information-Analytical Collection*, *Polar researches*

© Kiselyov A.A. The Historical Study about Cultural Landscapes of the Kola North

Abstract. The article represents a short review of the new book by prof. P.V. Fedorov «Cultural Landscapes of the Kola North: Structure and Historical Dynamics».

Keywords: *colonization, Arctic, Russia, North, urbanization*

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