

электронный научный журнал
«Арктика и Север»

ФГАОУ ВПО «Северный (Арктический)
федеральный университет
имени М.В.Ломоносова»

ISSN 2221—2698



Редакция электронного научного журнала
«Арктика и Север»

Arkhangelsk
2015. N 19







Arctic and North. 2015. N 19
Multidisciplinary internet scientific journal

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© Editorial board of internet scientific journal “Arctic and North”, 2015

Published not less than four times per year

The journal is registered at:

-  Roskomnadzor as an internet periodical published in Russian and English. Registration certificate of the Federal Service for Supervision of Communications, Information Technologies and Mass Media EI № FS77-42809 from November 26, 2010.
-  The ISSN International Centre — world catalog of serials and ongoing resources. ISSN 2221—2698, 23—24 March 2011.
-  The system of Russian Science Citation Index (RSCI). License contract № 96-04/2011R from April 12, 2011.
-  Directory of Open Access Journals (DOAJ) — catalog of free access journals, 18.08.2013.
-  NSD — database of higher education in Norway (analog of Russian Higher Attestation Commission) from February 2015.
-  InfoBaseIndex— complex multipurpose database of India in May 2015.

The Founder — FSAEI HPE Northern (Arctic) Federal University named after M.V. Lomonosov. The list of the editorial Board of the journal “Arctic and North” is published at the website: <http://narfu.ru/aan/DOCS/redsovet.php>. Editor-in-Chief — Yury Fedorovich Lukin, Doctor of Historical Sciences, Professor, Honorary Worker of the higher education of the Russian Federation.

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We will be glad to see you among the authors of “Arctic and North” journal!

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Социологические науки. Политология. Экономические науки
Social Science. Political Science. Economics

UDC 353.5+332.145

Top officials of the Russian Arctic:
«Now I understand that we have passed the razor's edge»



© Kurilov, Oleg G. Head of the Norilsk Town administration, Krasnoyarsk Krai, Vice-president of the Association for economic interaction of the Arctic and Far North City Alliance, a member of the Council under the Federation Council Speaker for Local Government, a member of the Council of the Krasnoyarsk Territory Municipalities

Abstract. The article represents one of the interviews with top officials of the Russian Arctic. Oleg Kurilov, head of Norilsk City administration, shares his management experience in the field of creation of the comfortable urban environment in the extreme conditions of the North, talks about his professional achievements. In accordance with the Presidential

Decree "On the land territory of the Arctic zone of the Russian Federation" dated May 2, 2014 № 296 Norilsk is considered as a part of the Russian Arctic. Kurilov O.G. believes that the most important task for him is providing the citizens with decent living conditions, the certain level of comfort and quality of life the people of Norilsk have already accustomed to.

Keywords: *Oleg Kurilov, head of the city administration, Norilsk, Russian Arctic, comfortable urban environment*

1. Could you tell about your experience and professional achievements in managing the region and municipality in AZRF? How long have you been working as a manager in the Arctic, what helps you?

I was elected to the post of the Head of Norilsk in March 2012 — it is nearly three years I have been working in this position. But my life in the North began much earlier, and Norilsk is my hometown actually, I have been living here for 35 years, moved here a teenager with my parents. And I know the local problems from different sides: as an ordinary resident, and now as a manager.

Oleg Kurilov's biography note. Born on the 8th of August 1967 in Orenburg. In 1988, in Norilsk has started his career as the annealing operator at the Norilsk Mining and Metallurgical Plant named after A.P. Zavenyagin. In 17 years he has passed a long way from the stage of a worker to the head. In 1999 he graduated from the Moscow State Law Academy, specialty "Jurisprudence". Since 2005, he been a leader of the regional projects of the Polar Division of MMC Norilsk Nickel. Since 2008 he worked as Deputy Director for Personnel and Social Policy of the Polar Division of MMC "Norilsk Nickel". In March 2012 he was elected to the Norilsk City Council of Deputies. March 20, 2012 at the first session of the IV convocation of the NCCD the majority elected him a head of the city of Norilsk.

Oleg Kurilov is actively involved in community activities: he is a vice-president of the Association of economic interaction of the Arctic and the Far North City Alliance, a member of the Council under the Chairman of the Federation Council for Local Government, a member of the Council of Krasnoyarsk territory Municipalities, a member of the Association of Local Self-government Leaders of the Krasnoyarsk Territory, a member of the Association of Siberian and Far East Cities, a member of the Board of Taimyr Dolgan-Nenets local branch of the Krasnoyarsk regional branch of the Russian Geographical Society.

Oleg Kurilov was awarded the honorary title of "Stuff worker of the Polar Division of MMC "Norilsk Nickel"; diploma of the Legislative Assembly of the Krasnoyarsk Territory; diploma of the Federation Council Committee on Constitutional Legislation, Judicial and Legal Affairs and the development of civil society; a medal of EMERCOM of Russia "For the Commonwealth to save". In 2013 he received an honorary diploma of the Federation Council of the Federal Assembly of the Russian Federation for his great personal contribution to the socio-economic development of the Krasnoyarsk Territory. He is married and has a daughter.

Perhaps I'm not ready to talk about personal achievements. Just because it is impossible to manage alone and provide the city with everything: it is always a team work, very versatile, diverse. The more professional the team is — the higher result is. And it's very hard work, because any city is a living organism. But the city above the Arctic Circle is a special body, fragile and highly sensitive to changes. We have specific requirements for safety and reliability, providing light and heat, transport and food. The slightest glitch or any ill-considered decision could lead to global consequences here. Price of the errors in the Arctic is higher than anywhere else. Trite but true. Town planning, utilities, and the most common questions of everyday life are solved with the amendment on permafrost, ice hius, polar night, and possible 60-degree frosts... The weather makes additional surprises every year.



Norilsk is located on the Taimyr Peninsula, 300 kilometers north of the Arctic Circle and 2,400 kilometers from the North Pole. It is 1500 km to the capital of the Krasnoyarsk Territory. Surrounding towns — ports of Dudinka (90 km) and Dixon (500 km). The distinctive feature of the location (the eastern part of the Arctic zone) is its inaccessibility and geographical isolation. Norilsk is not connected with the railway and road network of the country, there is only a motor road to Dudinka (90 km). The northern part of the Krasnoyarsk region is connected with the southern regions by seasonal river transport. Regular communication with the mainland is possible through the only airport on the Taimyr Peninsula in Norilsk. On January 1, 2014 the population of Norilsk, was 177.326 people. Norilsk is among the

five most northern cities in the world with a population of over 100 thousand people. Apart from Norilsk, Russian Murmansk, Norwegian Hammerfest, Anchorage in Alaska, and the capital of Finnish Lapland — Rovaniemi are in the top 5. The area of the Norilsk is 4.5 thousand km² or 450.900,85 ha. Two-thirds of the monthly average air temperatures in Norilsk are negative. Only the second and third decade of June, July and August are frost free. In winter, temperatures reach -56°C. In a small distance from the surface of the earth there is permafrost, going down to 300-500 meters. During the winter two million tons of snow falls down in the Greater Norilsk. An average per resident is 10 tons of snow per year. Norilsk has winter with long polar night and a short, rainy summer.

Here is a recent example. The year 2014 was abnormally rainy, and in 2013 there was a tropical heat in Norilsk. We experienced thawing of soil, road sags, dried up lakes, and the fall of the water level in the river Norilsk — the main source of technical and drinking water for the city. What to do in a situation when the already high risks increase? Administration of the EMERCOM together with the services and the management of MMC “Norilsk Nickel” decided to impose a state of high alert. The city lived in this mode for more than a year! For operational management we set up a special working group. We built waterworks which kept the water level on the mark, allowing normal functioning of all structures and critical infrastructure throughout the winter. It was an example of public-private partnership in action. You’ve asked about the achievements, and so I see our common achievement. We forestalled the occurrence of an emergency situation, the consequences of which could be so difficult to eliminate. That year, we carefully and accurately tracked all parameters. Monitoring was conducted around the clock. In case of water scarcity there was a plan off: first, for industrial, social and then, in the last instance — kindergartens and schools. And if all the efforts would have no positive result, we were ready to evacuate the city. Now I understand that we’ve almost passed on the razor's edge.

The following year, 2014, the city also lived in heavy duty. The fall of the water level in 2013 made our main hydroelectric power stations the Kureiskaya and Ust-Khantaiskaya to work at half strength, and the main burden fell on the Norilsk TPP. We had previously predicted that in these conditions the stations would not have enough fuel, and built additional pipeline: it started to operate last winter in just 3—4 months. Of course, it was also the joint work: two municipalities, Norilsk and the Taimyr, and the Norilskgazprom. We did not act in an emergency mode, but calmly and planned. In 2014, in contrast to 2013 we had a lot of snow, and in the summer rain was not stopping. We had to restore the washed away roads and some collectors. I am proud that we managed to prevent accidents.

2. Name, please, the achievements of the region, municipality you head in 2014. What problems could you decide, how did you manage to get successful results?

All I've said above were extreme circumstances. In general, for the managers working in the North, I believe, the most important task is to ensure the normal operation of the town, decent living conditions, the level of comfort, quality of life, which one is used to in Norilsk. This is to create a comfortable urban environment, and we have been working for it in 2014 and continue to work now.

In Norilsk people have special mentality. Today, people are saving money to "not limit themselves" on vacations, or to invest in housing on the mainland, or to pay the mortgage. People perceive Norilsk not as a city where they were born and are going to live, but as a temporary place of residence. Now, Norilsk people live there 40-50 years, then leave and come back home to Norilsk "from the continent", even retirees. They leave, compare and... come back. If people finally decide to leave, they still consider themselves as citizens of Norilsk, create their own communities and keep in touch.

So here's my job as the Head of the city — to provide people with decent living conditions comparable with the mainland, and even better. One of the goals is to revive the civil initiative, give the Norilsk people together with the administration, with friends and neighbors the opportunity to make their yard, porch and street prettier, cleaner and more comfortable. Therefore, we appreciate and support any activity of residents. Very often I repeat: we are living here and now, our children are growing up, and life is impossible and wrong to procrastinate.

In this regard, we are trying to build a friendly town with a comfortable environment. For example, in 2013, by the 60th anniversary of Norilsk, we repaired the longest main street — Leninsky Prospekt and renovated all facades on the territory from the entrance to the Norilsk to exit from it. City facades are repaired every year, not necessarily on the main streets. In past years we repaired facades of the Talnakh area, which anniversary will soon be celebrated, and the entrance to another area — Kayerkan. It was made just at the entrance, but now it pleases the eyes. We will continue but we don't have enough money to do all, it is a very large investment. Local budget is filled by two-thirds with territorial financial support; all amounts are to be necessarily confirmed by the territorial administration and the repairment of facades is not provided with as a particular financial support.

Besides facades, we continue to repair the basements within the framework of 10-year-old program that gives us 30–70 repaired objects annually. The houses included into the list of promising housing we repair the foundations. In addition, every year we repair at least 160

apartments. Many of them have been staying without repair for 20 years. We spend more than 800 million rubles on roads annually.

Achievements in recent years and I believe that these were our joint efforts with the MMC “Norilsk Nickel” resulted in opening three new kindergartens for 300 children each: modern, with terraces and swimming pools. So, every child aged three to seven can get a place at the kindergarten. Also we made a reconstruction of the Secondary School №6 that had not been repaired since 1953, the time of its construction. Now it is an almost new building, designed and comfortable for children with disabilities as well. For example, it is the only school in Norilsk with elevators and the latest interactive training equipment.

Norilsk children and young people have limited opportunities to spend time outdoors, and so, it is more important to build convenient places for recreation and rest than on the “mainland”. When we restored the building of the Youth Center, we decided what would be there and the choice was made in favor of a modern communication center for youth. So, children could come here and could be engaged in some joint activities and have interesting ways of spending their leisure time. With the same objectives we have repaired Sports Palace “Arctic”: it has renewed arena, fully repaired façade, collector and children's changing rooms. Not so long ago in Norilsk a new mall “Arena” was opened. Yes, it is a commercial project of MMC “Norilsk Nickel”, but such a center was needed for the city. With the opening of the “Arena”, with its stylized lanterns, cozy alleys, we feel ourselves a little bit more like in European city. This year, in “Arena” they are going to open a “water park” with a large fitness room and the swimming pool. I am sure it will also be in demand among citizens.

3. What have you failed as an Arctic local top-manager and why?

I would not put it that way. I am not collecting the results now, we continue to work. Of course, we have a lot of difficulties and innumerable problems, but there are ideas on how to improve the management and to bring the life of Norilsk to global standards and to compensate people the everyday life difficulties they are facing due to geographical and climatic reasons.

Problems that cannot be decided on the level of the municipality shall be addressed to the regional and federal levels. So, we raised the issue of the need to monitor the permafrost at the Krasnoyarsk Economic Forum, where the theme of further development of the Arctic was discussed. Scientific monitoring of the permafrost changes is very important for all the cities of the Arctic zone. Changes in permafrost lead to deformation of buildings and housing structures and infrastructure of the city. Now Norilsk has nearly a quarter of apartment houses with a high rate of physical deterioration. Every year we are forced to endure at least one house. Without a federal

program we are not able to solve the problem. Our proposals were heard by representatives of the Federation Council and taken under their personal control.

4. What about your plans for 2015? What should be done first?

Of course, we would like to finish the repair of all existing objects and move on to the next. But the economic crisis made us to build up plans based on the principle of priority. 2013 was difficult for the city. All public institutions came under the control of the region. We returned all facilities to the Krasnoyarsk Territory — and the territorial authorities took twice more taxes from us. Therefore, the year 2014 for us, we can say, has become a crisis year... Just now in Naryn-Mar the Congress of the Arctic and Far North City Alliance has been finished. Once again we have raised the issue of the municipal budget formation.

The current system of income distribution suggests that the own revenues of municipalities make up 50% of their budget, and in some municipalities, even up to 30%. The rest is provided in the form of gratuitous transfers from regional budgets, dominated by subsidies to balance local budgets. We need measures to ensure a balance of local and regional budgets. The absence of those results in the accumulation of unresolved problems. This is especially true for repairing expenditure because the municipal money is primarily directed to the implementation of social programs. Now the budget has not enough funds to carry out rescue and recovery operations, not to mention the maintenance of facilities in good condition. All this has a significant impact on the decline in the quality of life of citizens and reduces the possibility of developing the territory. Our proposals on amendment to the budget legislation of the Russian Federation set out at the Congress were sent to the Federation Council and the State Duma of the Federal Assembly of the Russian Federation.

In 2015, we plan to continue all started projects, to carry out social obligations, to work in the current mode, providing the vital activity of the city. There are strategic things, such as the construction of a bypass road that has been needed in Norilsk. Financial support we are going to get at the road fund and there is no need to ask the territorial authorities. Of course, the cost is high, but the road is needed to relieve the city roads, where the volume of traffic is increasing every year. After building a bypass road, we could start up the transport flow from Talnakh via Kayerkan (Note: Talnakh, Kayerkan — areas of Norilsk, the distance between them is about 50 km).

There are big plans concerning repairing of collectors. Norilsk unlike other northern cities has all of its service lines underground. Naturally, it is much more expensive to maintain and repair them, but Norilsk looks well-maintained.

During the years 2015-2016 there will be a need to implement one of the key strategic projects — to reconstruct the runway of the Norilsk airport. The scope of this work can be estimated by the fact: Norilsk Airport is the only “air gates” of Taimyr. This is a key transport object across the Arctic. The nearest airport is 1.5 thousand km in Krasnoyarsk. The project cost is about 12.5 billion rubles.

5. What future do you see for the Russian Arctic up to the year 2020? What should be changed in a better way, what will stay at the same level?

Of course, we would like to adopt a law on the special status of the Arctic zone, which has been discussed over last 15 years. Today, there is a concept and there is a program done. And the President instructed how to ensure the financing, starting in 2017. But in order for the program to work, we need a clear understanding of the prospects of the Arctic development. We have been raising the question of the establishment of a state-level single body dealing with the Arctic zone. We know, now there is such a commission under the Government of the Russian Federation. It is a very correct and timely action.

What future are we waiting for Norilsk? Our city has a well developed infrastructure and it could become a platform for the further development of Taimyr. Together with Dudinka it might be constituted a single Northern Territory that can accommodate even up to 50 thousand people. After all, of course, it depends on the needs in resource extraction projects. There were plans to build a terminal in Dixon, and if it happens, Dixon will come to life.

Discovered resource deposits in the Norilsk region are enough for half a century and more, so that enterprises have to work consistently. The region’s resources are extracted by the “Russian Platinum”, and in 2016 it is planned to receive products from the first deposit — Chernogorskoe. It is also the additional development and new jobs, inflow of labor: they stated the need for 3.000 workers, which means that they will come together with their families and we will accommodate about 7 thousand people.

After the closure of the nickel plant in Norilsk, owned by MMC “Norilsk Nickel”, the ecology will be improved. Production is expected to be closed by the end of 2016. Administration monitors the observance of social guarantees while reducing the stuff. Laid-off workers of the “Norilsk Nickel” are suggested a retrain and employment at the other plants or factories, retirees will leave for the mainland. In fact, there will be no nickel production in Norilsk — they will produce semi-finished products, which will go to other factories in other regions. But the Norilsk copper will be produced.

Of course, the area will remain industrial, and, for example, we won't talk about the development of tourism here: in our region, it may not be cost-effective, it is a utopia. So, only a few wealthy tourists, able to order a helicopter for such a travel, will continue to come to Norilsk or Putorana plateau.

6. What should we do for modernization of management on the federal level?

It is obvious that we need to implement all measures aimed to develop the Russian Arctic, adopt the federal law on AZRF. We need an audit of the program "Socio-economic development of the Arctic zone of the Russian Federation for the period till 2020", identifying sources of funding. Also it might be important to study the possibility of turn towards project management in the Arctic, their selection, investments and short-term implementation. It is important to develop regional institutes of horizontal integration in the Russian Arctic. We need to establish the registration procedure for the islands in the Arctic Ocean at the federal and regional levels and to care about national security in the Arctic. It is not only me, who has lots of positive expectations about activities of the State Commission on the Development of the Arctic established in March¹.

7. In your opinion, how could the economic crisis 2015-2016 influence the social and economic development of the AZRF territories?

I'll repeat we are experiencing the crisis now. I assume that next 2 years will mean stagnation for us: most likely, the projects won't be developed as fast as we expected. Two-thirds of our budget comes from the regional one, which has a huge deficit. We all live in the same space, and, of course, country's economic problems will affect Norilsk.

8. Should we continue the exploration and production of the hydrocarbons onshore, offshore and on the continental shelf in the Arctic?

In my opinion, there are no means, opportunities or intellectual resources to do that. This might be a project for future.

9. How do you see the further development of the transport along the Northern Sea Route?

The Northern Sea Route is not the future but the present of Norilsk. All of the major transport flows and goods delivery so necessary for the functioning of the city and export of products is carried by water. We are in the heart of Russia and in the center of the NSR. But the further development of the route, I think, needs being considered, since any increase in the flow

¹ Decree of the RF Government, 14 March 2015 №228, approved the Regulations on the State Commission on the Development of the Arctic. Decree of the Russian Government, 14 March 2015 №431-p, approved the composition of the State Commission on the Development of the Arctic, headed by Deputy Prime minister D. O. Rogozin. URL: <http://government.ru/media/files/Cozw5FAxCGc.pdf>; <http://government.ru/media/files/cIXc75AyPvw.pdf> (Accessed 23.03.2015). — Editors' note

of ships will cause environmental concerns, it will mean the end of the clean water for us. So, new security issues arise.

10. Tell us something about yourself, something that you consider important. How did you come to the Arctic, how do you evaluate your life in the North?

As I've said, I came to Norilsk, when I was 12 years old, with my parents. Graduated from the local high school, went away to the army, returned back and got a job at the Nickel Plant. Worked there as a crane operator 11 years. And only then, got a degree in law and became a specialist at the legal department. Throughout my 35 years in the North, like the majority of Norilsk citizens, I periodically thought of leaving. Thought of it a lot, especially in the 1990s, when the company did not pay salaries for six months. There were opportunities to move, and my apartment was "on the mainland". But when you come to "the mainland" and begin to compare it with Norilsk, you'll find out that the infrastructure is worse, salaries are lower, there are less social guarantees there, and the most important — people are not like in the North.

Why are Northerners leaving? They have already achieved everything they wanted, or found a job on the mainland with comparable level of salary and skills required, or they are going to develop themselves in some new spheres. In my case there is a third option. Every time I wanted to leave, new challenges appeared here. Once, the order for my dismissal has been signed. But at the last moment, I decided to stay and I'm not sorry. The fate would like the things to be so.

Reviewer: Lukin Yury Fedorovich,
Doctor of Historical Science, Professor

ПРИЛОЖЕНИЕ

к Указу Президента
Российской Федерации
от 2 мая 2014 г. № 296

**Сухопутные территории Арктической зоны
Российской Федерации**

1. Территория Мурманской области.
 2. Территория Ненецкого автономного округа.
 3. Территория Чукотского автономного округа.
 4. Территория Ямало-Ненецкого автономного округа.
 5. Территория муниципального образования городского округа "Воркута" (Республика Коми).
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- Примечание. Территории муниципальных образований, названных в пунктах 5 - 8 настоящего приложения, указаны в границах по состоянию на 1 апреля 2014 г.

UDC 353.5+332.145

**Top officials of the Russian Arctic:
«Association "Arctic Municipalities" defends the interests of the population»**



© **Gmyrin, Mikhail A.** Mayor of Severodvinsk, Chairman of the Association "Arctic Municipalities"

Abstract. Responding to the questions of the interview with top officials of the Russian Arctic, Michael Gmyrin focused on the mission and objectives of the Association "Arctic Municipalities". Severodvinsk municipality was among the founders of the Association in December 2014. Its creation would help the integration of municipalities and contribute to the sustainable socio-economic development of the Arctic territories. Severodvinsk has positive

experience of making social projects. Improvement of the quality of life and living conditions of northerners is one of the major challenges currently facing all Arctic Municipalities. The work of the Association "Arctic Municipalities" may be of the main activities of the State Commission on Arctic chaired by O. D. Rogozin.

Keywords: *Mikhail Gmyrin, Association "Arctic Municipalities", Severodvinsk, social projects.*

Association "Arctic municipalities"

Today the most important direction of the state policy of the Russian Federation is the socio-economic development of the Arctic zone. On the 20th of February 2013 Russian President Vladimir Putin approved the development strategy of the Arctic zone of the Russian Federation and the national security for the period up to 2020². Federal and regional authorities' activities are now demonstrating the union of government, business and science for the future of Russia and the preservation and strengthening of its position in the Arctic. In October 2014 Arkhangelsk hosted a forum "For the glory of the Navy and of the Homeland", where the governor Igor Orlov told about the Arkhangelsk Regional Government's initiative — the establishment of the Interregional Association of urban districts and municipal areas of the Russian Arctic [1]. This

² URL: <http://www.government.ru/docs/22846/> (Accessed: 14.03.2015)

initiative was supported by the Security Council of the Russian Federation. Establishment of the Association would promote the united efforts of local government and contribute to the cooperation between municipalities aimed discuss the issues of sustainable socio-economic development of the Arctic territories.

The establishment of the Association "Arctic Municipalities" was addressed to the Council of Deputies of Severodvinsk. Thus, the municipality "Severodvinsk" was among the founders of the new association. The 25th of December 2014 was a historic day: Arkhangelsk signed a memorandum on Association. In addition, the agreement was signed by the Mayor of Severodvinsk, the Head of the Zapolyarnyi district of the Nenets Autonomous District Alexei Mikheyev and the Head of the Primorsky district of the Arkhangelsk Region Valentine Rudkin.

The aims of the Association are defined in its Charter:

- 1) to promote the development of the local self-governance in the Arctic zone of the Russian Federation;
- 2) to develop of the inter-municipal and inter-regional cooperation in economic, scientific, technical and cultural spheres; experience exchange and strengthening of good-neighborly relations;
- 3) coordination of interaction between municipalities and federal and regional authorities, international organizations, public authorities and local authorities of other countries on issues affecting the living conditions of the population and socio-economic development of the Arctic zone; proposals to improve the legislation;
- 4) coordination of joined efforts of the municipalities, included into the Arctic zone of the Russian Federation, aimed at the implementation of the state programs and development strategies in the Arctic.

To achieve its goals the Association is planning to perform the following:

- a) to interact with the state authorities of the Russian Federation, municipalities, legal bodies and individuals;
- b) to promote the idea of local self-government;
- c) to participate in the development and review of the federal, regional and municipal regulations, affecting the interests of the municipalities that are part of the Arctic Zone;
- d) to communicate with non-profit organizations (associations) of the Russian Federation, regions of the Russian Federation and development international contacts and communications;

- e) to be an active assistant for state authorities and local self-government proving the with proposals on coordination of their activities in solving common problems;
- f) to provide local governments with the methodological and legal assistance.

In March 2015 Russian Prime Minister Dmitry Medvedev signed the Regulation "On the State Commission on the Development of the Arctic"³, approved its composition and the Deputy Prime Minister Dmitry Rogozin was appointed its Chairman⁴. The State Commission on Arctic is now responsible for coordination of activities of the federal and regional authorities involved in the development of the Arctic. Decisions of the State Commission will be mandatory for all agencies and to implement them may be issued decrees, orders and other acts of the President and the Government of the Russian Federation.

The Association of the Arctic Municipalities could become an integral part and one of the main objectives of functioning of the federal Arctic Commission on integration and cooperation between 4 territories of the Russian Federation (Murmansk region, Nenets, Yamal-Nenets and Chukotka Autonomous Districts) and 16 municipalities of the Russian Arctic according to the Presidential Decree, 2 May 2014 № 296. The outcomes of the Association's activities, we hope, will be used by the State Commission on the Development of the Arctic, chaired by D.O. Rogozin, who has once visited our town, and is aware of its achievements and problems. The Association is planning to participate in Russian governmental programs and international projects (investment, tourism development, etc.).

Our Association takes into account the experience of the Board of the White Sea, functioned in 1997-2002, consisted of 4 territories of the Russian Federation, heads of municipalities on the coast of the White Sea from the Republic of Karelia, Arkhangelsk Region, Murmansk Region and Nenets Autonomous District [2]. We are also aware of the need for close cooperation with the Arctic and Far North City Alliance established in 1992 (President — Shpektor I.L.). The Alliance consists of 52 cities and regions of the Far North and equivalent areas. Russian Arctic is part of the Far North, it is fully included in the structure of the Alliance, and so, its composition is more representative than Association "Arctic municipalities".

³ URL: <http://government.ru/media/files/Cozw5FAxCGc.pdf> (Accessed: 16.04.2015).

⁴ URL: <http://government.ru/media/files/clXc75AyPvw.pdf> (Accessed: 16.04.2015).

Social project experience in Severodvinsk

Severodvinsk (Emblem from year 1967) can share a positive experience of social projects, which could be useful and interesting for other Arctic municipalities. Our city is successfully implementing modernization of the town according to the investment plan, approved by the Government of the Russian Federation. One of its major projects has already been completed — the reconstruction of the Arkhangelsk highway. Severodvinsk got a new modern highway with four line traffic. As part of the Plan the representatives of small and medium-sized businesses are able to get loans through the

Microfinance Fund.

Historical note. The town grew from a small settlement called Sudostroy founded in 1938. In 1938-1957 the town was known as Molotovsk. In accordance with the presidential decree “On the land territory of the Russian Arctic”, May 2, 2014 №296 Severodvinsk is part of the Arctic zone of the Russian Federation. The territory Severodvinsk municipality includes the nearby settlements and constitutes 119,349 ha. The area of the town is 12,051 ha. Geographic coordinates: 64°34'N, 39°49'W. The amount of residents was 189.7 thousand people in January 2013. Among them: 188.5 thousand people live in urban areas; 1,2 thousand people — country side residents. By the 1st of January 2014 the total number of population decreased to 188,420 people, including urban population — 187,284 people and rural population — 1,136 people.

The annual average number of labor force in Severodvinsk is 120.1 thousand people. 93 thousand people (49% of the population) are employed in Severodvinsk. The majority of the employed population is concentrated in large organizations and medium-sized business companies. The main industries are: shipbuilding and repair, electric power, building materials, food industry and etc. The complex of the major enterprises consists of: JSC “PO” Sevmash”, JSC “CA” Zvezdochka”, JSC “SPA” Arktika”, which employ 37 thousand people or 40% of the economically active population⁵. The economy of the town is represented by the largest and unique shipbuilding complex of the country where Russian Navy ships are constructed and repaired.

⁵ Северодвинск. URL: <http://www.severodvinsk.info/?idmenu=10> (Accessed: 14.03.2015)



Picture 2. 600 years of the Nikolo-Korelsky monastery in Severodvinsk
URL: <http://www.severodvinsk.info/photorep/2010/12/19/01.jpg>

Severodvinsk Major Biography note: Mikhail Arkadevich Gmyrin was born on the 1st of March 1959 in the Oma village of the Nenets Autonomous district of the Arkhangelsk Region. He has degrees in Law and Techniques — graduated from the Leningrad Institute of the water transport, Modern Institute of Humanities (Moscow), Pomor State University (Arkhangelsk). M. Gmyrin was elected to the Arkhangelsk Regional Assembly 3 times, since 2004 he has been working for its Committee on Military Industry and Conversion policy. On the 1st of March 2009 he was elected as a Major of Severodvinsk by the majority — 64.01%; and on the 8th of September 2013 M. Gmyrin was reelected by 64.59% of votes.

The program of resettlement from old houses implemented in co-financing from the state “Assistance Fund of reforming the housing and communal services” helped us to build two houses in 2014 (total area — 3,3 thousand m²). This enabled 62 Severodvinsk families to celebrate the housewarming. In 2014 we got six new multi-storey buildings. The total area of housing is about 18 thousand m². Improvement of the living conditions of citizens is one of the major challenges all municipalities are currently facing. Severodvinsk has some more urgent problems: the construction of a new road bridge over Nikolskoye estuary and the reconstruction of Yagrinskoe highway.

The town is also involved in the municipal program “Social support of the population” which allows to adjust the shortcomings of state and regional programs in the field of health and social protection. Additional funds are allocated from the local budget for expensive operations and the purchase of medicines, the provision of targeted financial assistance to single, low-income and disabled people. Particular attention is paid to veterans: the program “Social Taxi” and special funds aimed to help them to repair apartments. The total amount of the “social support” for 2015 is about 103 million rubles.

Another social project have been being implemented in Severodvinsk since 2009 — “School Meals”. 90% of school students are provided with meals at schools. As a result, doctors admitted the reduction of gastro-intestinal tract diseases among pupils and students.

Healthy life is impossible without exercise. Participation of Severodvinsk in the federal and provincial program allowed us to open a new fitness center on Yagri in 2014. Funds for the construction documents were allocated by JSC “CA” Zvezdochka”. It also helped us to start the construction of the first indoor skating rink in Severodvinsk. It is expected to be completed in 2015. Also we have plans to repair another sports and recreation complex — “Planet” and to purchase the sports equipment this year.

Joint efforts of the Arctic towns, members of the Association, will help to receive additional funding to solve socio-economic problems. After all, the main task of the new organization is to improve the quality of life of people in the Arctic zone. We have plans to participate in the International Tourism Forum in May 2015 held by Scientific and Intellectual Center of the NArFU named after M.V. Lomonosov. It is expected that the University will be one of the partners of the Association “Arctic municipalities”.

Interest to the new organization has been already shown by other areas of the Russian Arctic. Our door is open to all municipalities of the Arctic.

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Reviewer: Lukin Yury Fedorovich,
Doctor of historical science, professor

Состав Арктической зоны Российской Федерации

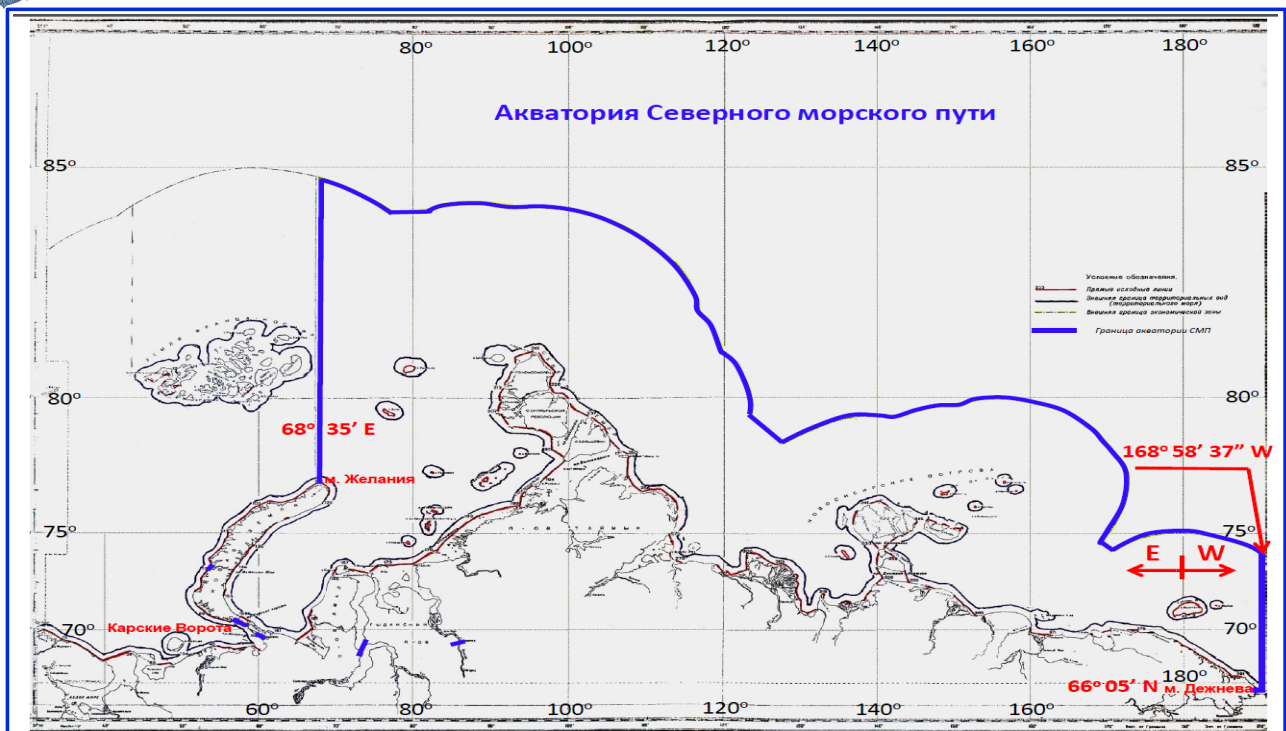


Picture 3. Composition of the AZRF in 2014 / © Cibulskii A.V.

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ФГКУ «Администрация Севморпути»



Picture 4. The water area of the Northern Sea Route / © A.N. Olshevsky

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Top officials of the Russian Arctic:

"Vorkuta is my home town. Life in the Arctic has tempered me"



© **Shumeyko, Evgeny A.** Head of the Vorkuta Town administration in the Komi Republic, Honored worker of the Komi Republic. E. Shumeyko was awarded the badge "Miner's Glory" I, II and III Degree.

Abstract. Under the "Top officials of the Russian Arctic" project, Evgeny Shumeyko talks about the positive changes in his hometown Vorkuta, where he was born, worked as a miner, and now he is the leader of the Town administration. Official membership in the Russian Arctic zone gives a new status for Vorkuta and means its further development. In these circumstances, the urban economy should be brought into the light of reality, to optimize the

infrastructure in order to have chances for the further development. «Strategy of socio-economic development of the urban districts 2014» defined the role of Vorkuta as a being a strategic outpost of Arctic exploration in the European North of Russia.

Keywords: *Evgeny Shumeyko, Vorkuta, mono industrial town, strategy, infrastructure, housing fund, traditions, city holidays, budget*

1. Tell us please about your experience, professional achievements as a manager of the territory in the AZRF. How long have you been working? What is inspiring you?



I've been working as the leader of the Vorkuta town administration since October 2012. But before that, I worked at the State Council of the Republic as a Vice speaker, at the Council of Federation as a senator, at the Regional government, where I have dealt with problems of the Vorkuta town and they've always been the priority for me. When I'd become a leader of the town, I knew that the situation is not easy in Vorkuta. And the same situation is in many northern towns. Vorkuta was built per 300 thousand inhabitants with adequate social infrastructure, roads, and thirteen residential micro-

districts — the same number as the operating coal mines. After the restructuring of the coal industry in the 1990s the majority of the mines were closed. But the entire infrastructure remained. And the burden on its content bears the municipality and the city budget. First of all, to develop in these circumstances, the municipal economy should be brought into line with today's realities, that is, to optimize the infrastructure. It is important to do so the city would remain comfortable for residents. Closing or reorganization of all social and cultural facilities — is not only stressful for its employees, but also for the residents of the area. This negative reaction must be avoided whenever possible. After all, north is a place of their residence and it has a serious impact on the human body and health.

It is important to note that reducing the long-term infrastructure projects, we create comfortable conditions in those areas of the city that are compactly populated and will develop. We open modern bank and postal offices, develop a telephone and internet networks. Large financial institutions, non-governmental health and insurance companies come to Vorkuta, not to mention the development of trade networks. All this forms a modern look of the Vorkuta town.

2. Could you, please, say some words about achievements of the municipality you're managing in 2014? What problems have you solved, how could you achieve positive results

Despite the fact that the budget for 2014 was less than the budget in 2012 for almost 1 billion rubles, we were able to do a lot. The work was done to improve and repair roads, social facilities, resettlement, hold high-level cultural and sports activities and we were able to prove that efficient and competent approach to the allocation and control of spending of budgetary funds opens up additional possibilities and reserves.

I am glad that during my leadership the town got no new problems, and we concentrate our efforts on solving the problems that have not been solved for decades.

From an interview, 31st of October 2013: "What is a real headache for you? — Utilities. The town itself and its structure were designed for two hundred thousand people. Now Vorkuta has about 100 thousand people, but actually only about 80 thousand people live there. And here is the usual five-storey building in the village where three or four families live. And this house must be completely heated and it is costly. All lost income of the management companies is compensated by the local budget. We had an inventory of all housing, municipal property, the next step — dialog with the population" [1].

Life of the individuals in the Far North is not limited to manufacturing. Therefore, we are paying great attention to the preservation of tradition, including folk festivals, sports, national and indigenous holidays. Vorkuta is not by chance called "the capital of the world"; in this town nobody divides people by their ethnicity. Now, the events in the South-East Ukraine made us

especially appreciate the good friendly relations and peaceful sky over the head, we have revived and held Ukrainian Folk Festival “Chervona Ruta”, that gathered dozens of creative teams from the cities and districts of the Komi republic and neighboring territories. The festival was expected to be a citywide but turned into inter-regional one and was held brilliantly. Everywhere during the festival it was possible to hear not only Ukrainian language but Russian as well, the words of encouragement and greetings in the languages of other peoples living together in our town.

We have revived two wonderful sports tournament “Cup of the Arctic” in the winter karting and “Arctic Cup” in karate among men, participated by 12 athletes from Russia, Kazakhstan and Germany. And, of course, “Polar Games”! Urban Sports Festival first organized in 1999 by Igor Leonidovich Shpektor — ex-mayor of Vorkuta, the permanent President of the Arctic and Far North City Alliance, and now also a member of the Public Chamber of the Russian Federation. So, our annual wonderful holiday “Polar Games” is included in the calendar of major sporting events of the country and attracts up to two thousand guests from the cities, towns and districts of the North. For 17 years it has been remaining the mark of the Vorkuta town.

We were criticized for being too much in the Vorkuta holidays, and I think this is not a luxury but a vital necessity. Human life in the North is directly related to the extra load on the body, shortage of oxygen, sunlight, warmth and greenery. As a result, the person gets depression and stress. Therefore, a good mood of citizens is the most important thing.

Moreover, this year we have allocated additional funds to ensure that in the winter, during the polar night, when the sun does not rise above Vorkuta, further decorate with garlands and colored lanterns, not only in the town's main streets and squares, but the main roads and bridges.

I believe it was the correct decision to resettle people and disconnect utilities at 42 apartment buildings and 25 entrances to the ICM and to remove 20 abandoned houses. Let me remind you once populous town, today has changed dramatically. The population of Vorkuta decreased. And today, in some town areas only 5-20% of houses are inhabited. It is not difficult to understand that the town has to pay a lot to keep the empty houses and to compensate the resource supplying and service companies for lost income. It is not even tens and hundreds million of rubles, which could be spend more effectively and for the benefit of citizens! So, my first initiative was the holding of total housing inventory. And the next step was to work on the resettlement from houses and sparsely populated neighborhoods in the areas of the town expected to develop rapidly. This will eventually allow us to get away from such a phenomenon as “unpromising” villages or territories. Further work is made on the resettlement of sparsely populated apartment blocks, followed by disconnecting them from the utilities and it has brought

a significant reduction in the load on the town's budget. Another achievement is the reducing the queues for citizens who want to improve their housing conditions. And this is reality despite the number of empty apartments, which we have found! At the end of 2013 669 families were in need of better housing, now there are only 149. And we are continuing to work. We are carrying out the resettlement of sparsely populated houses, repair of vacant apartments and provide housing for people who are ready to stay.

The achievements can we call a large-scale work aimed to repair the road network of the town. We performed an unprecedented amount of repairs and made road markings, installed road signs, traffic lights, replaced equipment, road crossings and installed railing. This work led to a decrease in the level of accidents and injuries on the roads of the town. We were able to renovate sports facilities, cultural monuments and urban areas.

Vorkuta is now officially recognized as a part of the AZRF and this I would call the major achievement of the year 2014 as well as the work we've done together with the Head of the Komi Republic and its Government.

3. What could not you complete and why?

The plans were ambitious, including capital repair and modernization of coal-fired boilers, replacement of worn-out pipes, but as always insufficient funds of the local budget due to a significant decrease in tax revenues to the town's budget play its role. The main failure of the year, I think, was inability to complete the resettlement of the district Sovietsky. It was necessary to use 58 million and we would be able to save 64 million next year. We are trying to do the best we can and to fulfill the interests and wishes of citizens in the selection of the new place of residence. Also we could not to update the snowplows.

Another area of work that has not yet been completed with the expected results — the transportation of baggage and personal belongings in small and medium-tonnage containers for northerners going outside the North. Russian Railways are now working only with 20-ton containers. So it creates considerable inconvenience and a high cost of transportation.

4. What are your plans for 2015? What should be done first?

In 2014, we worked out a strategy of socio-economic development of Vorkuta until 2020. According to it the town is expected to grow during this period. This document defines the mission of Vorkuta as a strategic outpost of the Arctic exploration in the European North of Russia. The strategy aims to promote the development in such important fields as industry, small and medium business, tourism, social facilities, engineering, infrastructure, housing and etc.

It is necessary to create favorable conditions for investors and industrial development. Vorkuta - is not only coal, it is gold, manganese, barite, and a number of other resources need to be developed. The company "Shell" is occupied with oil and gas exploration here. Another thing is that there is a problem with the staff and we've made a very correct and timely decision to establish a branch of Ukhta State Technical University here, which will prepare not only the miners, but also oil and gas industry workers, builders and geologists.

The year 2015 will not be easy, but if we can consistently implement the tasks that we have set ourselves, we'll avoid any serious negative changes. We have plans to continue the work that we have been successfully conducting the optimization of urban infrastructure. We'll try to make more efforts to resolve the problems we were not able to cope with. It would be very timely to continue building modern houses and apartments which our citizens certainly deserve. By now we've begun the work in remote villages Yelets and Sivomasskinskoe where new houses were built in Vorkuta in 1996.

From the interview, 31st of October, 2013: "When it comes to the future of Vorkuta, today it is not only a dream, but also economically viable prospects for the further development of the town. And they support the idea that we will build new coal enterprises, develop gas, oil and other industries. So talking about Vorkuta as a future working village is just another attempt to play on the psyche of the population. Vorkuta has been a town and will be a town" [1].

5. What future do you see for Russian Arctic til the year 2020? What should be changed and what is going to stay without any changes?

According to preliminary geological research data the Arctic contains of about 30% — undiscovered, technically recoverable natural gas reserves, 20% — gas condensate and 13% — oil. According to the International Energy Agency, the demand for natural gas in the next decade will grow. In China, the annual demand will grow by 7%, in India — by 4.7% and overall in the world market — by 1.8%. The Arctic as an area with enormous mineral reserves and a strategic transport route — the Northern Sea Route, which is so attractive for many countries, including non-Arctic ones.

The geopolitical situation shows that it seems to be impossible to remain in the same positions or to return to the recent past. One must make an effort to overcome the consequences of the "crisis of the 1990s". The future of the Arctic is defined in the Development Strategy of the Arctic zone of the Russian Federation and the national security for the period up to 2020.

Vorkuta region has reserves of natural resources and it is a reliable logistics base in the Arctic with significant infrastructure, human resources and the potential to achieve the strategic goals and basic tasks of the Russian state policy in the Arctic. It is necessary not only to extract

minerals from the depths of the Vorkuta region, but also process them for the benefits of the territory and its future development.

On a behalf of the Vorkuta citizens I would like to express my sincere gratitude to President Vladimir Vladimirovich Putin and the Head of the Komi republic Vyacheslav Mikhailovich Gaiser for persistence and convincing position, which ultimately allowed Vorkuta to become officially recognized as a part of the land territory of the Arctic zone of the Russian Federation. The corresponding decree was signed by Vladimir Putin on the 2nd of May 2014. This gave Vorkuta hope for the future as long as the town was seen as a huge transport hub, one of the start points for the development of the Arctic, its exploration industry.

New Arctic status of Varkuta means its further development, creation of new industries and new jobs, development of small and medium-sized businesses, growth in wages and, consequently, additional revenues to the town budget and possibilities to attract highly qualified professionals. We expect the increase in the quality of housing, social and communal services. Now we are also working on the development of transport accessibility.

Today there is a project of construction of the railway to Ust-Kara that will provide an access to the Northern Sea Route and the road to Vorkuta, which is economically important in the current monopoly of the DRD LTD. This road will help to attract investors to our town. This year we begin the construction of the strategically important objects for the Ministry of Defense and the Ministry of Emergency Situations. Also we are continuing with the development of the Pechora coal basin, including coal deep processing (coal chemistry).

6. What should be done for modernization of management at the federal level?

We consider it necessary to provide the Arctic towns with the tax exemptions for the period of modernization of social sphere, housing and communal services, road management, and snowplows.

In addition, we consider it appropriate to conduct an audit of the state program "Socio-economic development of the Arctic zone of the Russian Federation for the period till 2020" and determine the amount and sources of funding. It is nessecary to move towards the project management, creat a portfolio of the Arctic projects, work on selection of projects, investment and their implementation in the short term perspective.

7. What kind of impact will the economic crises have on the social and economic development of the AZRF in 2015-2016?

It is difficult to say for sure what impact the crisis will have. Different factors affect the development of the Russian economy and regions. The crisis has both negative and optimistic scenarios. However, it is now clear: it is not that bad as it seems at first glance. The crisis is a challenge for us and for the Russian economy as well. It is time to review capabilities and the efficiency of the resource use, available capacities and reserves. Now we are experiencing the establishment of a coherent state policy in the Arctic zone. It is understood that the development of the northern territories is an important task aimed at ensuring the development and security of the Russian Federation, which can not be done on a rotational basis. And we have a hope for the revival of the social infrastructure, the creation of an effective system of motivation, better quality of life, including education, health, culture and sports. The Arctic is now becoming a long-term strategic national project.

8. Should we extract and proceed the hydrocarbon resources on the Arctic continental shelf, in the sea and not on the land?

The increasing demand for hydrocarbons and the depletion of fields and deposits make us search for the new resources available for extraction. Significant reserves are found in the Arctic territories, including the shelf. Arctic continental shelf is the last major oil and gas deposit, which could eventually become a major source of energy on the planet. To strengthen the competitive positions of Russia in the global market we need to continue the exploration of hydrocarbons, because even a temporary suspension of work due to the decline in oil prices could slow down the advancement of Russia in the Arctic.

9. What kind of future do you see for the development of transportation along the Northern Sea Route?

The Northern Sea Route is one of the cheapest ways of transportation. According to experts, the Northern Sea Route is able to reduce the time for transportation of goods from 7 to 22 days. Therefore, there is no doubt that the importance of this transport route will grow. According to the President of Russia, there is a need to fasten the construction of ice-class vessels, new nuclear and diesel-powered icebreakers, to prepare a modern navigation infrastructure, renew the communication facilities, and to create everything one may need in case of emergency along the way.

The Strategy for the Development of the Arctic zone of the Russian Federation and the national security for the period up to 2020 envisages the development of a common Arctic transport system of the Russian Federation as a national marine highway for all year-round operation, including the Northern Sea Route and the related river and rail communications, as well as the airports and airlines networks.

Some measures aimed to develop the transport accessibility are included in the regional program “Socio-economic development of the Arctic zone of the Komi Republic for the period till 2020”. Some projects are implemented under the personal control of the Head of the Komi Republic Vyacheslav Gaiser. One of such projects is the construction of inter-regional railway “Belkomur”, which will connect Ural with the Arctic. Implementation of this project ensures the development of a unified transport system of the Russian Arctic, improves the quality of infrastructure, diversifies the main supply routes to the world markets and helps to achieve a growth in freight traffic along the Northern Sea Route.

Construction of the railway “Vorkuta — Ust-Kara” will contribute to the development of coal deposits discovered north of Vorkuta. These deposits can be by the mined pit method and there will the railway line to the coast of the Kara Sea available.

Today, one of the main problems is the lack of development of the Arctic highway linking Vorkuta with other regions of Russia. That fact slows down the economic and social development of the Vorkuta area.

10. Tell us something about yourself, something that you're considering important. How did you come to the Arctic, how do you evaluate your life in the North?

Vorkuta is my homeland. I was born in 1966 in a miner's family. My father came from the north of Bryansk, mother — from Kuban. Like most of my peers I grew up in barracks. Still remember, feel the warmth and think I had a happy childhood. The feeling of happiness was stronger due to the fact that the town was being built at that time. Living conditions were quite severe, but everyone worked, lived and had a happy family. Otherwise it was impossible to build this town. I remember sparkling eyes of my parents: they were young; they were building our beautiful town and felt their involvement in its fate; so, they were happy! I think that now, after Vorkuta is recognized as a part of the Arctic zone, we will begin a new stage of development and a happy gleam will be seen in the eyes of its citizens, those who work in the town and those who will build tomorrow's Vorkuta.

Once again, Vorkuta is my birthplace. And for me it is the best place on Earth. The place where wonderful, openminded and good people live.

From the interview, 31st of October 2013: "The fact that Vorkuta is my home town and the home to my close people is just an additional responsibility and a moral burden. In this case, there is no margin for error, but it is impossible to do something with no errors. We have to think carefully about every move and have not to make any mistake. It is much easier, perhaps, to start carrier on unfamiliar territory. And generally speaking, the work is quite complicated and you need to search for new approaches and solutions for local urban problems. Road could be crossed only by walking "[1].

I am sure that Vorkuta is a town of strong and very friendly people — others are simply not able to survive here. 13 years of work underground caused a feeling of comradeship in me; the work for the Independent Trade Union of Miners taught me firmness in defending the interests of ordinary miners. I am proud that I've took part in solving one of the most acute problems of Vorkuta — relocation of the families of dead miners outside of the Far North, to the places with better climate conditions. It was possible to help those families due to the personal involvement of President Vladimir Putin. I've participated in the solving of this problem from the beginning and until the departure of the last family to a new place of residence.

Life in the Arctic has tempered me. The people, I was lucky enough to work with at the mine and in the trade union, were my teachers at different stages of life and directly influenced the formation of my character and personal qualities. I am eternally grateful to them and endlessly devoted to my beloved town.

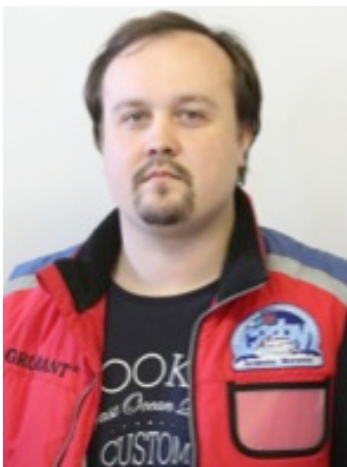
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The «Arctic competition» problem and the marine transport hubs: Is it a clash of business interests or the knockout game?



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Abstract. Analysis of the causes and sources of the so-called "Arctic competition" between Murmansk and Arkhangelsk identifies strengths and weaknesses, opportunities and threats (SWOT-analysis) of the marine transport hubs. The focus of the article is the transport integration problem and logistics. Arkhangelsk and Murmansk marine nodes were created as the part of a single freight logistics system in

the North and were not supposed to compete, but to complement each other. Nearest future will bring up the issue of the national transport and logistics integrator with the functions of the "upper-corporative" logistics center responsible for evidence-based, homogeneous and transparent re-distribution of traffic and freight logistics market bases in the western part of the Russian Arctic.

Keywords: *Arctic competition, Arkhangelsk, Murmansk, sea port, a river port, logistics, freight base, service, transport and logistics hub*

Introduction

The main role in the development of remote areas of the shelf of the Barents, Pechora and Kara seas and the Arctic coast of Russia is played by several transport routes, rail and water transport nodes located on the rivers Pechora, Ob and Yenisei and two large marine ports - Arkhangelsk and Murmansk. Arkhangelsk Commercial Sea Port and Murmansk Commercial Sea Port are the main transport hubs in the Arctic. Today there is a marked increase in the volume of transshipment of goods through the ports associated with the intensification of work on the shelf and in the supply of oil and gas projects in the Arctic. Regional and local authorities have the opportunity to replenish their budgets, to raise the level of employment of the population, to solve social problems through the participation of regional suppliers and to provide work in the Arctic.

The growing flow of goods in the Arctic allows maximum use of Arkhangelsk and Murmansk ports. In this regard, stevedoring companies, representing the Arkhangelsk and Murmansk seaports are wrongly regarded as competitors. In strategic terms, with the integration processes of redistribution of traffic and freight bases, significant synergies and a multiplier effect on

economic development of the whole transport logistics in the Arctic is possible. One may remember the successful experience of cooperation of ports in the twentieth century, when the ASCP and MITI worked as complementary maritime transportation hubs. Within the planned economy, transport logistics of the Northern economic district followed the principle of uniform redistribution of traffic between the two ports operating at the national level of the structural development of integration processes between regions, and the destructive competition was excluded¹. Administrations of two major northern ports and regional authorities were interested in the effective redistribution of traffic between the ports of Murmansk and Arkhangelsk. However, the failure of the planned economy led to the situation when the integrator function of transport logistics became unused, and the former relationship between the regions and ports, in some cases, became a destructive confrontation and competition for investments, resources, traffic and cargo base. Originally, the term “Arctic competition” was used in the Russian media only in the context of relations with foreign countries. But today, this concept is extended to the relations between the RF territories².

Interregional “Arctic competition” background

Today and Arkhangelsk and Murmansk have their major development projects of maritime transport nodes requiring a very large federal funding and support at the highest levels of power. For Murmansk it is a project of integrated development of the Murmansk transport unit (MTU) with its cost of 132.3 billion rubles, 56.6 billion rubles comes from the federal budget and 75.7 billion — extra budgetary sources³. For Arkhangelsk it is a project of a deepwater port in Arkhangelsk with the cost up to 35 billion rubles. The port is going to be built in conjunction with the implementation of the “Belkomur” project⁴. According to preliminary experts’ estimates, for the “Belkomur” it is required at least 176 billion rubles (excluding construction of a separate route to Murmansk)⁵. Due to the given upcoming multi-billion cost and the obvious financial problems it seems that both projects will not get federal investments. Only one region will receive the money, the region with powerful lobbyists at the federal level, the region able to prove that its maritime transport hub would be the most popular and necessary for the development of the Russian Arctic. Thus, the so-called “competitive” struggle against the neighbor port is likely to be subjective,

¹ URL: http://www.consultant.ru/document/cons_doc_LAW169369/?Frame=3 (Accessed: 05.12.2014)

² URL: <http://51rus.org/news/policy/3380> (Accessed: 21.11.2014). Морская администрация порта Архангельск стала филиалом ОАО «ММТП». URL: <http://www.echosevera.ru/news/2014/01/21/8606.html> (Accessed: 12.12.2014).

³ URL: <http://ria.ru/economy/20140424/1005283733.html> (Accessed: 06.12.2014)

⁴ URL: <http://www.arctic-info.ru/news/28-12-2012/stroitelstvo-glybokovodnogo-porta-arhangel-sk-mojet-nacat-sav-2014-gody> (Accessed: 06.12.2014).

⁵ URL: http://www.belkomur.com/news/index.php?ELEMENT_ID=2661 (Accessed: 14.03.2015).

and aimed to get support and funds for the “major project”. At the same time, the interests of Murmansk are of interests for oil companies seeking ways to reduce the costs of setting up databases and to ensure their projects by federal investment. For example, the announced proposal (April 2014 at a meeting with Vice-Premier of the Russian Government) to suspend the state contract on the MTU project and redirect part of the resources in favour of transport projects in the Crimea has met strong resistance of the oil lobby, so funding has been saved ⁶.

It is obvious that the project of the Arkhangelsk port area “Severny” has not such a powerful lobby. Not coincidentally, step by step, Arkhangelsk is getting a fixed image of the unpromising, shallow, freezing and expensive port and its development of does not make sense and there is no need to invest a penny of federal investments. The deputy head of the Ministry of Transport of the Russian Federation Viktor Olersky said the Belkomur route should be focused not on Arkhangelsk but on the Murmansk Transport Hub ⁷. Therefore, in the nearest future, Arkhangelsk is most likely doomed to loose in the so-called “competition” with Murmansk for federal investment. It is strange that the participants of the “competition” have no understanding that a further weakening of the naval component of the Arkhangelsk economy won’t help, but harm the development of Murmansk.

At the same time, we have a real Murmansk’s “Arctic competitor”, and it is not Archangelsk, it is the “deep and not freezing” **port of Kirkenes**, where the company "Norterminal" is planning to build stationary oil terminal with storage capacity of 1 mln tons by 2018. Kirkenes has already accommodated foreign oil and gas service companies working on projects in the Arctic with the Russian operators. According to records, in 2013 about 70% of vessels in the port were the ones served the Russian oil companies in the Kara Sea ⁸.

But, Kirkenes is not a competitor to Murmansk in its struggle for the Russian federal investment and probably therefore, it is not a subject for constant attacks in order to establish the primacy of the port of Murmansk in the Arctic in public opinion. However, in the long term perspective, the Russian oil and gas operators may, because of business interests, the high level of the western maritime service, choose Kirkenes as a convenient alternative to Murmansk ⁹. In Kirkenes there is a great chance to become the “main gateway to the Arctic”. In December 2014 the Ministry of Foreign Affairs of Norway, despite the adherence to anti-Russian regime of

⁶ URL: <http://itar-tass.com/ekonomika/1183230> (Accesed: 06.12.2014).

⁷ URL: <http://www.warandpeace.ru/ru/news/view/55936/> (Accessed: 11.12.2014).

⁸ URL: <http://www.oilru.com/news/391113/> (Accessed: 11.12.2014).

⁹ URL: <http://barentsobserver.com/ru/energiya/2013/09/rossiyskuyu-arkticheskuyu-neft-na-norvezhskie-terminaly-17-09> (Accessed: 24.11.2014)

sanctions imposed by the United States and the EU, allowed Norwegian companies based in Kirkenes to provide supply for vessels working for Russian offshore oil and gas projects in the Barents, Pechora and Kara Seas in 2015¹⁰.

Due to the development of the MTU project, Murmansk aims to solve the problem of congestion of its railway. However, the rail distance from Central Russia and the Urals via Murmansk is the longest. Sooner or later, the project of building the railway line that will connect the border area by the shortest route Nickel — Pechenga (Murmansk region) to the port of Kirkenes could be actualized. Now the project is a pending one but seems to be very profitable for customers. Its goal is to switch to the ports of the Barents freight flows between China and the US East Coast. According to published data, there is a need to build a section of a length about 40 km, which is comparable with the length of new 46 kilometers railway line from the station to the output station Lavna of the Oktyabrskaya railway according to the project of the MTU integrated development¹¹. According to Russian experts, the road Nickel — Pechenga — Kirkenes can not only relieve the congested port of Murmansk, but also “to divert a significant portion of Russian and foreign trade cargo from Murmansk”, especially the loads of “Belkomur” so much expected by Murmansk, to huge transport corridor “N.E.W. Corridor”. Today, Murmansk region's western neighbors are planning to build a railroad from the Finnish town of Rovaniemi to the Norwegian port of Kirkenes (about 550 km) for the development of this area. We can assume that if they do so Kirkenes will be more attractive with its modern rail and sea transport hub located near Murmansk¹².

Information practices of the “Arctic competition”

Murmansk has a special position in the Arctic, primarily as a base atomic icebreaker fleet, as a center of Arctic oil transfer, as a service center for drilling in the Barents Sea and as a transit point for foreign vessels. It should be noted that the Arkhangelsk rail and sea transport hub essential for delivery of general cargo in the Arctic and plays a significant role in coastal freight carriage along the NSR. A coastal cargo delivery by smaller vessels is the most demanded kind of carriage along the NSR today¹³. In the Arkhangelsk region has all the major engineering companies, most qualified personnel in the field of shipbuilding and ship repair and all the oldest scientific and educational institutions. Arkhangelsk, in spite of serious failures in lobbying at the

¹⁰ URL: <http://barentsobserver.com/ru/energiya/2014/12/norvezhcy-podumyvayut-o-prodolzhenii-snabzheniya-ros-siyskoy-neftyanki-09-12> (Accessed: 24. 11.2014).

¹¹ URL: <http://itar-tass.com/ekonomika/852783> (Accessed: 10.12.2014).

¹² URL: <http://www.1prime.ru/Russia/20090611/756206028.html> (Accessed: 10.12.2014).

¹³ URL: <http://sdelanounas.ru/blogs/41301/> (Accessed: 10.12.2014).

federal level, remains a priority area for placing an integrated production base to provide industrial Arctic projects with a proper supply. Murmansk region has not such a serious industrial, scientific and educational potential, but the creation of the Murmansk transport hub is impossible without the involvement of the respective potentials of its neighbors.

From the standpoint of inter-regional “arctic competition”, the existing need in investment for industry, transport and logistics, educational and scientific potential of Arkhangelsk is likely perceived as a threat scenario by Murmansk authorities. The major federal financial flows would be available for the development of a single Arctic port, only one major marine transport hub, only one “investment basket”, “one pocket” and one “main gates to the Arctic”. Today the public consciousness is being actively introduced the idea of “unconditional advantages of the Murmansk port” as the “Main Gates to the Arctic”. Some articles are published belittling the importance of the Arkhangelsk port in comparison to Murmansk and leveling the role of Arkhangelsk in discovery and development of the Russian Arctic. The purpose of the information policy is to prepare the public opinion to the fact that the Murmansk would get all federal investments in its transport, infrastructure, scientific and social development. It is forgotten that both ports: the oldest Russian Arctic port of Arkhangelsk, which is over 430 years old, and the port of Murmansk, which was created in 1916, were a part of the Alexander County of Arkhangelsk province, and both ports play an unique role in transportation, logistics and economy of the North. This fact is denied now and it is an obvious sign of propaganda. For example, a news website “Tribuna” published an interview with the governor of the Murmansk region, where, if we’ll turnst the website, she said that Murmansk “... is the beginning of the Northern Sea Route, a key point at the junction areas of the Arctic and Atlantic oceans. We have all year-round, ice-free port with the necessary depth. These are obvious facts. That is why all expedition to the Arctic in the 20th century started from Murmansk...” [1].

It is obvious that such a concept is not true. *First*, it is so, because the Northern Sea Route begins in the area of the Kara Gates in the Nenets Autonomous District and Novaya Zemlya (Arkhangelsk region). *Second*, the majority of famous Arctic expeditions of the 20th century began in Arkhangelsk. However, should we pay too much attention to “arctic brands” while seriously analyzing the value of the ports? It is more important to make an objective comparison of the real advantages and disadvantages of the Arctic transport and logistics in Arkhangelsk and Murmansk.

The dark side of the cliché “ice-free and deep”

Considering the above-mentioned methods of “arctic competition”, one can see that the phrase “ice-free and deep” is used as the evidence of Murmansk port’s superiority. Or, as it was

quoted above: “ice-free port with the necessary depth”. In order to objectively evaluate this cliché we should answer the key question: what’s for do we need more depth and why do the Arctic vessels need a deep and ice-free port? Russian Arctic — is mostly shallow and ice-covered region. We use vessels with a shallow draft, and, as a rule, the vessels are accompanied by the icebreaker, the icebreaker fleet in Russian Arctic navigation conditions should also have ships with a shallow draft.

More important advantages of rail and water transport hubs are: less distance for delivery to the port, availability of railway tracks near the port, low service costs, the availability of warehouses, piers and platforms for industrial facilities, existing of infrastructure, its accessibility, opportunities to reduce the delivery time and quality of services. For example, in Europe, seaports of so-called “fourth generation” provide its clients with a possibility to accomode facilities at the port area. So, the port should have a huge area for construction of the industrial objects and facilities. In this regard, the post “sandwiched” by hills is not a good option in comparison to a one on the flat territory.

Deep-water and ice-free port of Murmansk has an undeniable advantage over the Arkhangelsk port only when handling the export of large quantities of cargoes, first of all — coal. This fact is well-known to professionals working in the field of transport logistics in the North. The depth of the Murmansk port is primarily needed for the entry of large bulk carriers, which can be loaded by large volumes of coal or phosphate rocks. These goods are unprofitable to carry in small quantities, or in small vessels, and therefore there is a need for deep-water port, working usually for export, to the west. However, mainly, not bulk but general cargoes are sent to the east, and to the Arctic ¹⁴. Oil and gas projects in the North and in the Arctic require vessels able to enter the mouth of the Arctic rivers and shallow approaches of the port stations. So, there is a need for vessels able to carry: pipes for gas pipelines, mobile self-propelled and self-propelled equipment, goods in transport packages, piece goods in packaging, barrels and building materials, concrete and metal structures and a large number of small packed goods. Big ships, accepted by a deep-water port of Murmansk, could not be used due to their large draught, and they are not normally used for coastal shipping in the Arctic and for the import of goods to the Arctic coast territories. Not coincidentally, the major requirement for the construction of new icebreakers and ice-class vessels for the Russian Arctic is a maximum reduction of their draught. In particular, the

¹⁴ URL: http://zakonrus.ru/gost/g26653-90.htm#_Toc64361946 (Accessed: 06.12.2014).

requirements for a nuclear-powered icebreaker LK-60 Project 22220, suggest such a construction, which makes it possible to use in shallow water areas, including the mouth of the polar rivers¹⁵.

Murmansk sea trading port accepts vessels up to 15.5 meters draught, more than 265 meters length and capability up to 150 000 tonnes, but such vessels are not usually used for short sea shipping in the Arctic and are not required for the majority of Arctic oil and gas projects¹⁶. For comparison, Arkhangelsk Commercial Sea Port accepts vessels with a draught of 10.7 m, but it is optimal for the Russian Arctic. That is why the MMC “Norilsk Nickel” has built five new ice-class vessels with a draught of 9.5 meters, able to enter Lena, Yenisei, Ob and other polar rivers¹⁷.

One more fact, used to underline the superiority of the Murmansk port, is that: “the turnover of goods at the port of Murmansk amounted to 31.4 mln tons in 2012 and at the port of Arkhangelsk — 4.4 mln tons”¹⁸. However, the first number is for the bulk, dry bulk and liquid bulk cargoes, coal, fertilizers, crude oil, sent in bulk for export. But the second number mainly reflects cabotage cargoes in the Arctic, delivery of containers, equipment, pipes, equipment for Arctic oil, gas and infrastructure projects. Thus, it becomes clear why the question of what port should be called “the main gates to the Arctic” Arkhangelsk or Murmansk is solved by methods of information war in the media.

The fact that the White Sea and the Northern Dvina River freezes in winter, does not mean that the port of Arkhangelsk is freezing. Since the last century Arkhangelsk has been using icebreakers in winter. By 1917, the port of Arkhangelsk had 16 icebreakers¹⁹. Since the mid-twentieth century, the icebreaking in the winter has been always done. By comparison, ice conditions and the depth of the Baltic Sea are not easier for navigation than the ones in the White Sea and the port of St. Petersburg also works with icebreaker assistance in the winter. However, none of this could be disadvantage in case of good transport logistics. During the First World War Arkhangelsk port was the most popular in Russia, its cargo turnover in 1916 amounted to 2.8 mln tons. During World War II approximately 4 mln tons of cargoes of strategic importance were transported through the piers of Arkhangelsk. That time, the Arkhangelsk and Murmansk ports operated as parts of a single mechanism and had a common integrator to redistribute the traffic flows.

¹⁵ URL: <http://www.arctic-info.ru/ArcticPath/News/Page/dmitrii-kobilkin--eto-sydno-otkroet-novyu-stranicy-v-istorii-osvoenia-arktiki> (Accessed: 06.12.2014)

¹⁶ URL: <http://www.energyland.info/analytic-show-104838> (Accessed: 08.12.2014)

¹⁷ URL: <http://fleetphoto.ru/list.php?did=647> (Accessed: 06.12.2014).

¹⁸ URL: <http://ria.ru/economy/20140114/989126015.html> (Accessed: 06.12.2014).

¹⁹ URL: www.ascp.ru/htm/3.htm (Accessed: 06.12.2014).

Advantages and disadvantages of the ports: integration perspective

According to the project manager of the LLC “Morstroytechnology” Sophia Katkova, “the most expensive in the nomenclature transportation group is a container (from 100 to 120 thousand rubles, depending on the region of delivery). That is why the maritime transshipment of containers in Arkhangelsk — the most economical way of cargo delivery to the Arctic coast and the Barents, Pechora and Kara Seas. This applies to all rail freight of the 3rd class (the most expensive): “After the comparison of prices for transportation, Arkhangelsk is the best logistics area for cabotage deliveries along the Arctic coast. And Murmansk, certainly, is more successful starting point for placement of large export-import streams. Depths, ice conditions allow it to work with the vessels of a large draught in a protected bay” [2, p.10-12].

Unfortunately, the media rarely reflects the opinion of professionals in the field of transport logistics who indicate that the objective reasons for competition between the ports of Murmansk and Arkhangelsk do not exist. Each port has its own permanent niche, its cargo base and work priorities. And with the construction of the port “Sabetta” due to the project “Yamal LNG”, offshore projects in the Pechora and Kara Seas, the cargo delivery market has, speaking the language of transport experts, “overstocked volumes” during the summer ²⁰. And today it is necessary not to think about the competition but how to integrate and distribute uncoordinated flows of goods without any future problems for the rail and water transport hubs in Murmansk and Arkhangelsk.

In order to maximize the benefits of logistics and opportunities of both ports, we need to talk about the advantages and disadvantages of Arkhangelsk and Murmansk transportation hubs. We need to talk about it as objectively as possible, without any clichés, such as “non-freezing and deep-water port” or “main sea gates to the Arctic”.

Objective reality is the unsolved problem of low capacity of the railway on the approaches to the port of Murmansk, which may end many plans for its development. This question is decided by the development of the railway infrastructure, including the construction of a new railway branch from the station “Vihodnaja” to Lavna and three railway stations ²¹. For comparison, the Arkhangelsk port is served by two stations on the Northern Railway (NRW) without any problems. In contrast to the access roads to the MSP that are overstocked by coal, fertilizers and other bulk cargoes, Arkhangelsk railroad tracks, especially in recent decades, remain underutilized. In addition, Arkhangelsk has the pipeline “Nyuksenitsa-Arkhangelsk”, and there are no freight trains with fuel oil for the local power plants. For comparison, Murmansk remains without a pipeline and

²⁰ Архангельск в поисках груза // «Созвездие-ревю». 2014. №19. С. 32—33.

²¹ URL: <http://www.murmanshelf-conf.ru/archive/presentations/2013/RosTransModernizacia.pdf> (Accessed: 06.12.2014).

freight trains with fuel oil make the situation with rail transportation along Oktyabrskaya railway (ORW) even worse. At the same time, the amount of goods, imported to Arkhangelsk by rail, continues to fall. Thus, in January — November 2014 the NRW provided transported 57,707,000 tons of cargoes, which is below the level of in 2013 by 7.7%. Thus, the NRW has formed additional reserve capacity to attract new cargoes to ASCP ²².

Despite the fact that the capacity of the railway that goes to Arkhangelsk is significantly higher than the road to Murmansk, the development of port railway stations in both ports is needed. The stations should allow the possibility to place a certain amount of goods on the additional railway tracks at the entrance to the port area. In the future, this will let Arkhangelsk to avoid the sad experience of Murmansk when it comes to the railway transportation. It is easier to create such a network in Arkhangelsk, where there is a lot of space and no rocky hills like in Murmansk. According to transportation experts, Arkhangelsk urgently needs to increase the network of railway sidings and dead ends, where it will be possible to place a part of freight wagons in times of peak traffic.

Experts admit that the possibility of congestion in the Archangel rail-sea transport hub has increased. It might occur when several large customers, acting inconsistently without total logistics integrator, could send their cargoes to the port of Arkhangelsk at the same time. According to transport experts, during the summer season in the Arctic, on the NRW lines can get up to a thousand or more wagons at the same time [2, p.12]. When the three month volume of cargoes arrives to the port each month, no port in the world would be able to cope with such volumes quickly. In this situation, in addition to other rail lines or dead ends, where it would be possible to place the freight trains, the Murmansk and Arkhangelsk need an overall integrator to coordinate their actions with shippers and stakeholders, including JSC “Russian Railways”. Today there is no such a national integrator and it damages the interests of the carriers.

Placement of the service centers for the Arctic projects

One had no doubts about benefits the companies get while placing their cargoes in the port of Murmansk, especially on the first stage of their work to ensure prospecting, exploration and drilling on shelf of the Barents Sea. Geological study of the Russian Arctic shelf requires a lot of work, deliveries and demand for good port services. The depth of the MSP allows collecting large modular systems, for example, offshore platforms. In winter the port does not need icebreaking assistance. That fact makes the work of the port services easier. To understand the

²² URL: <http://szd.rzd.ru/news/public/ru> (Accessed: 20.05.2013).

scope of work it is enough to say that the geological study of the Russian shelf is 10 times lower than the one of the US in the Chukchi Sea and 20 times lower than the study of the Arctic shelf in neighboring Norway. The density of the coating seismic work in the most promising waters of the Arctic seas, except the Barents and Pechora Seas, is not more than 0.15 km per km², and the eastern seas — less than 0.1 km per km² [3].

However, the MSP area is divided into areas of different owners. Creating a common production and logistics base to ensure oil and gas project requires, as a rule, combining several of these areas, so sometimes the only way is to buy or rent the port areas. As the result there is a need to conduct separate negotiations, with no guarantee that they will be successful. So far not every company has the opportunity to create a base in the port of Murmansk. For example, the case of LLC “Gazpromneft-Sakhalin” has created a supply base at the berths №44 and №45 of Murmansk port. LLC “Gazpromneft-shelf” rents moorings shipyard №35 for its cargoes. The company “Karmorneftegaz” uses berths in the port area Lavna for its supply and “Rosneft” provides itself with the place for collecting oil plantforms in the area of the 82th (ship repair) factory in Roslyakovo. Only “Gasflot” owns piers in Murmansk today. According to A. Fadeyev, Head of the department of production of LLC “Gazpromneft-Sakhalin”: “industrial development of hydrocarbons, mineral and biological resources in the Arctic will continue to grow, that is why the competition for convenient infrastructure areas with high growth potential will continue to increase” [4].

Great number of contractors and subcontractors and even from the Arkhangelsk region are now trying to create their own base in the MSP area. For example, JSC “Belfreight” and its activity to establish and widen its own service base in the port of Murmansk. The company has already moved more than 300 containers for drill cuttings from offshore platforms in the Kara and Pechora Seas to Murmansk. It is worth noting that Arkhangelsk recently got a new production of offshore containers and delivers them to Murmansk by the shortest sea route. Such a logistics solution eliminates the risks associated with renting container equipment from foreign suppliers. And it proves that the industrial potential of Murmansk is very often the industrial potential of suppliers from the neighboring Arkhangelsk and Severodvinsk. In 2013 and 2014, due to the placement of Arkhangelsk supplier’s base in the Murmansk port, its customers — “Gazprom burenie” and “Rosneft” received the necessary containers fast. It was extremely important for seasonal drilling of the offshore wells, carried out in a short ice-free period²³.

In the future, maintenance of own servicebase seems to be labor-intensive and costly activity for the companies and oil and gas projects operators. Considering international

²³ ГК «Оптимист»: стратегия импортозамещения// «Созвездие-ревью». 2014. № 21. С. 20—22.

experience, the operators would benefit from the establishment of one major production and logistics base in Murmansk, which would deal with all companies and operators and provide them with high international standard services. It is observed in the neighboring Norwegian town of Kirkenes. Foreign oil and gas companies, attracted by Russian operators to participate in projects in the Arctic Barents, Pechora and Kara Seas, prefer Kirkenes to Murmansk, due to the low level of bureaucracy and better logistics [5].

Maybe sooner or later Murmansk would demand service base experience of Kirkenes. But Russian companies are not ready to follow that path, and instead of creating a single base, they establish separate bases for their projects in different parts of the port's area: each base for a separate project. The lack of land for large-scale construction and development of industrial production, so necessary to establish a large base of industrial projects in the Arctic along with the railway traffic problems and long "rail shoulder" are the most significant disadvantages of the Murmansk port. The development of the western shore of the Kola Bay and construction of a new coal terminal, rail lines and new "Lavna" port can only partially improve the situation. But generally speaking, some problems, for example, the existence of a longer "rail shoulder" than the one in Arkhangelsk and a lack of space in the Kola Bay would still remain unsolved.

Choice of the port depends on «railway shoulder»

Today, the companies planning to work and working on the Arctic shelf use, mainly, the area of the MSP. This, according to the general director of "Belomortrans" (Moscow) Mikhail Sisin, is naturally, because at the stage of drilling in the Barents Sea it is convenient to place a supply base on the Kola Peninsula. But at the next stage of field development, when companies go into the Pechora and Kara Seas, the Gulf of Ob River, some of the service bases will certainly be relocated to the port of Arkhangelsk. The distance to these areas through the Arkhangelsk rail and marine transport hub is shorter for hundreds of kilometers than through the Murmansk transport hub. In addition, Arkhangelsk port plays an important role of a leading reserve in the winter²⁴.

These facts are well known to transport and logistics companies, who to develop the scheme of cargoes delivery in the Arctic. Thus, Project Manager of "Morstroytechnologija" (St.-Petersburg) Sophia Katkova emphasizes that the "rail shoulder" of delivery for different cargoes to Arkhangelsk is shorter than the rail delivery to Murmansk. "Shorter "rail shoulder", and, accordingly, the value of the railway tariff are the most determining factors in the delivery of goods from Central Russia and the Urals. At the same time, the railway tariff in the supply chain

²⁴ Архангельск в поисках грузов // «Созвездие-ревью». 2014. № 19. С 33.

occupies a significant part of the costs (for deadweight — up to 30-40%, depending on the region of delivery). It should be noted that according to other experts, the railway tariff may occupy only 15-20% of the cost, which is quite a lot. If we compare sea freight and the project points in the Arctic, the difference between Murmansk and Arkhangelsk won't be seen when it comes to the vessels of equal tonnage and deadweight for transportation of goods. If we compare the logistics for bulk goods, including large-diameter pipes and equipment (including a variety of metal constructions and etc.), the proportion of freight charges for the supply will be higher — 55-80%. Nevertheless, the delivery through Arkhangelsk remains attractive for these goods" [2, c.10-12].

Choosing a port on the Arctic, the main criterion is a distance of delivery: 20 hours — the minimum time of delivery by train Moscow — Arkhangelsk. For comparison, a freight train from Moscow to Murmansk takes about 40 hours, plus downtime. The transit of Russian goods to the Arctic areas through Arkhangelsk is shorter than through any other port of the North-West, and the delivery is faster. Today, transport companies prefer to send some categories of goods to the area of the Gulf of Ob through Arkhangelsk, not Murmansk. Thus, today the Government of the Arkhangelsk region should concentrate on the development of cabotage cargo delivery in the Russian Arctic — the most profitable for Arkhangelsk, and the main flow of imports and exports, especially exports of coal, as long as the "Belkomur" project won't be implemented, should be left to Murmansk ²⁵.

Cargo traffic and bases

Murmansk port has traditionally deals with large volumes of bulk cargo, and this is the main reason for its high turnover compared to Arkhangelsk. But these are goods which are often not for the Arctic, it is coal mainly. Murmansk port exported more coal than the ports of St. Petersburg, Kandalaksha, Vyborg and Vysotsk combined. The main direction of export is Western Europe²⁶. Due to the increase in the volume of coal handling the capacity of the railway to the port of Murmansk does not allow it to attract more large cargoes. And the port, due to the fact that it is mainly a coal port, can not fully develop other directions until the construction of a new coal terminal on the western shore of the Kola Bay will be completed.

In the port of Arkhangelsk some cargo areas are often idle due to the lack of new cargoes. ASCP can handle up to 4.5 million tons of cargo a year — three times more than the port does. Transshipment large volume of bulk cargoes, including coal, via Arkhangelsk port will be available after the "Belkomur" project and the construction of a deep-water port area "Severny". However, a

²⁵ Ibid.

²⁶ URL: <http://www.energyland.info/analytic-show-104838> (Accessed: 07.12.2014)

reasonable question is about the reality of these plans in future. Therefore, objectively Arkhangelsk is not successful in handling bulk cargoes and does not make any competition to Murmansk.

But, as it was indicated above, Arkhangelsk is still the leader in cabotage, as it is beneficial for customers. Due to the free and open area and storage facilities, the Arkhangelsk port is often used as a backup point for accumulation of cargoes prior to navigation in the Arctic by companies and it is providing all services of a so-called “dry port”. In Arkhangelsk it is not necessary to blast rocks and to level the hills in order to create an industrial site for the needs of a new business or expand the railway stations. Arkhangelsk and its industrial satellites (Severodvinsk and Novodvinsk) are supplied with gas, which reduces production costs of enterprises. By objective measures, Arkhangelsk Sea Commercial Port should experience a boom in demand for its services. But the successful development of the Arkhangelsk port is prevented by a number of factors and many of them have arisen not only for objective reasons. For many years there was a question about the rates of port charges. They were the highest not only in Russia but also in the world. Only in 2014, the rates of ASCP were managed to lower. But, before the federal government made the appropriate changes in the order of the Federal Tariff Service of Russia, 30.04.2013 № 85-Т/1 “On approval of the rates of port charges for services rendered by “Rosmorport” in the seaports of the Russian Federation” it took the personal involvement of the President of Russia. His orders, made on the 12th of November 2013 at a meeting of the Board of the Federal Tariff Service, approved the reduction of rates: for foreign-going vessels by 20%; for vessels in coastal waters — 10%; icebreaking fee is reduced by 20% ²⁷.

The new rates are used since the 1st of January 2014. However, according to transportation experts, reduction of rates does not change the situation, and it is necessary to cut rates by 50%. Development of the Arkhangelsk port is not that brilliant not only because of tariffs but also due to the degradation of traditional cargo bases of wood and pulp for export, so intensive in the 20th century. In particular, it was the main reason for the reduction of traffic through the RDP “Bakaritsa” in the ASCP.

Development of the ASCP: example of RDP “Levyi Bereg” and PRR “Bakaritsa”

In Soviet times the ASCP was a port for delivery of pipes for the gas pipeline “Urengoy-Pomari-Uzhgorod” and today, when it is time to update the old Soviet pipes with new ones, Arkhangelsk sea port will once again be in demand as a transshipment point for the gas pipeline modernization project. The RDP “Economia” has been a place for delivery of large-diameter pipes

²⁷ URL: http://www.rosmorport.ru/arf_portcharges.html (Accessed: 07.12.2014).

for the Bovanenkovo — Ukhta gas pipeline (the project “Yamal”, “Gazprom” company), coated pipes for “MRTS-Defender” complex in the Baidarata Bay in the Kara Sea. The ASCP has been working with the Vyksa Steel Works (JSC “VSW”). The company delivers sheet steel of a large format from Germany through the port of Arkhangelsk. For 6 years, the ASCP has imported about 1.5 million tons of cargo. And the port receives large-diameter pipes for gas pipelines made by JSC “VSW” for export. New Arctic mega-project, where the ASCP is actively involved, is the construction of the port “Sabetta” and a plant for liquefied natural gas (LNG) on the Yamal Peninsula. “Yamal SPG” — is the largest new oil and gas project in Russia today. In addition to the construction of these facilities, the project includes the development of logistic and infrastructural development of the Northern Sea Route (NSR). This project is able to provide the loading capacity for 3 years and more, after the LNG plant will be operating.

It is profitable today to place individual production and complex industrial production on the territory of the Arkhangelsk port. It is not surrounded by hills, and the mouth of the Northern Dvina has a lot of free areas suitable for the construction of any large industrial facilities. The port can solve most of the production challenges faced by companies, willing to work in the Arctic. Arkhangelsk port is located in the center of the largest industrial cluster in the north of Russia. Railroad to Arkhangelsk has never seen traffic jams typical for other ports of North-West. Arkhangelsk is fully gasified and this fact reduces energy consumption of enterprises. Vessels coming to the port of Murmansk lose a lot of time because of the entering limitations due to the rule that the ships of the Northern Fleet pass first.

Due to these advantages, on the territory of the Arkhangelsk port, it is possible to create an integrated logistics chain, to develop a dynamic network of production and distribution of freight flows in a single transport unit. This process is not only possible, but it has already begun. Archangelsk port is working with the “Mezhregiontruboprovodstroy” company (JSC “MRTS”) specializing on the underwater engineering construction of trunk pipelines for oil and gas complexes, and the company has its own fleet. The company has chosen Arkhangelsk Sea Commercial Port and bought the territory and piers of the former coal terminal of PRR “Levyi Bererg”. In fact, today JSC “MRTS” uses the ASCP piers to service its customers, including: “Gazprom”, “Transneft”, “LUKOIL”, “Exxon-Neftegas Ltd”, “Rosneft”, “Norilsk Nickel” and many others. And we can predict that with the development of oil and gas projects in the Arctic, these operating companies and other customers will increasingly use the industrial potential of

Arkhangelsk and Severodvinsk, profitable rail and water transport logistics, as well as the possibility of research and educational institutions ²⁸.

Another area of the Arkhangelsk port — PRR “Bakaritsa” almost stopped working due to the degradation of previous cargo bases and its low demand for the Arctic projects. Depth of the “Bakaritsa” was originally designed for ships of the Northern Shipping Company with a maximum allowable draft of 7-7.5 meters. The disadvantage of using the “Bakaritsa” is the existence of two bridges (rail and road). Ships have to go through these bridges, and it is further time-consuming. However, the PRR “Bakaritsa” is convenient for long-term storage and this can significantly reduce the cost of transportation. The area is served by the railway station “Bakaritsa” of the NRR. The obvious advantage for the “Bakaritsa” is a direct access to the M-8 federal highway (Arkhangelsk-Moscow). Thus, the PRR “Bakaritsa” is of interest to industrial companies, searching for long-term storage warehouses for large quantities of goods destined for delivery in the Arctic area. The PRR “Bakaritsa” has enough available sites and storage facilities for long-term storage and it has good loading and unloading equipment ²⁹.

On the relevance of the uncompleted ASCP development projects

The disadvantage of the Arkhangelsk port is its unfinished projects and transport infrastructure development started in Soviet years. In particular, today the more important role in freight logistics is played by the M-8 federal highway, which has recently been reconstructed. Road transportation is now a serious competitor to the rail transport, and it is not just because of the tariff policy of the NRR. Road transportation allows the customer to calculate the delivery to the port up to hours. However, the M-8 federal highway ends in the area of the Road Bridge over the Northern Dvina. Therefore, at the federal level, we should lobby for a decision on its extension to RDP “Economiya” through the Circle road. The region should seek the inclusion in the federal program to build a new bridge over the Kuznechikha River that will bring the M-8 federal highway directly to the docks of RDP “Economiya” of the ASCP. It is also required construction of a new road and a rail bridge near the Turdeevskaya timber base. A bypass road should also start there. The construction of these roads has been already put into Arkhangelsk urban plans. And the approach channels, berths, etc. will be administered by the Rosmorport.

According to the management of JSC “ASCP” Murmansk and Arkhangelsk Commercial Sea Ports have never been and will not be competitors, because each port has its own areas of transportation. A large amount of mass cargoes, such as coal could be transported via the port of

²⁸ МРТС осваивает север // «Созвездие-ревью». 2014. № 21. С.28

²⁹ URL: <http://www.ascp.ru/htm/st2.htm> (Accessed: 07.12.2014)

Murmansk. All small cargoes and supply, general cargo, containers, pipes, building constructions, building materials, machinery could be transported via Arkhangelsk. Specialization and experience of Arkhangelsk port workers related to the fact that the focus on small consignments gives the customer a distinct advantage in the segment. Transportation of container cargoes through Arkhangelsk is very convenient way of delivery to the Arctic and the North. Transit shipment of MMC “Norilsk Nickel” — the main ASCP’s partner for over 70 years, today consists of approximately 40% of container cargoes. The Arkhangelsk port operates a specialized container terminal. Despite the fact that the transportation of general cargoes is a priority for the port, it is necessary to focus on universalization of cargoes and to maintain staff’s skills, tested for many decades and possible to be claimed by customers to maintain the sustainable development of the port. In any case, imported goods will be delivered to Arkhangelsk and customs clearance procedures take place here. So, the export and import trend of the ASCP remains. But the most important fact is that the ASCP has reason for the universalization of work with cargoes, because it is the only Russian sea port, received a license to work with all 9 classes of dangerous goods, which means that it can handle almost any cargo³⁰.

Conclusion

Competition and integration of transportation and logistics in the Arctic were the major concern of this article. It was emphasized that the Arkhangelsk and Murmansk sea transportation hubs were created as part of a single freight logistics system in the North and should not compete, but complement each other. This requires the establishment of the national logistics integrator in the form of logistics centers at the level of the regional administration, not only in Murmansk and Arkhangelsk, despite the fact that the main hubs’ management, including administration of the ASCP, were moved to Murmansk. The Government of the Arkhangelsk needs to help development of professional skills of marine personnel and to study the tariff policy, traffic forecasting, creating conditions for attracting new profitable freight bases. Scientific data and research could be used for these purposes. All scientific work should be carried out on the basis of outsourcing specialized institutes and consulting firms commissioned by the regional government. The absence of state-level logistics integrator of regional management and scientific forecasting scenarios of maritime logistics, could lead to the fact that the Arkhangelsk sea port would be busy with a variety of not coordinated actions of different companies.

For Murmansk it is important not only to solve the problems of rail transportation, but also to develop more rational use of the seaport territory, to create a large commercial service base

³⁰ Архангельский морской порт: инвестиции в развитие // Созвездие-ревью». 2014. № 20. С. 4

instead of several independent bases of oil and gas operators and to involve the industrial enterprises of the Arkhangelsk region in its infrastructure development. Along with the integration with neighboring Norway, which offered Murmansk a rather rational project of a common “Pomer Economic Zone”, one more urgent topic is the the development of normal relations between Murmansk and Arkhangelsk ³¹. The most important step is a common and conscientious objection of non-constructive ideology of the “Arctic competition” between the Archangelsk and Murmansk and the economic integration, means coordinated work of suppliers in the North and in the Arctic on the basis of mutual awareness, coordination and equitable participation in Arctic projects.

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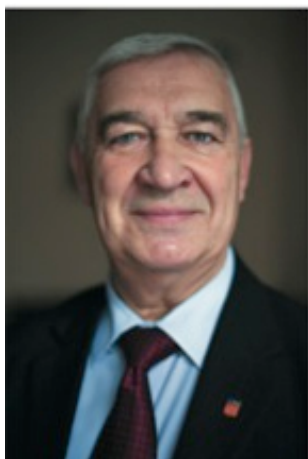
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³¹ URL: <http://www.murman.ru/themes/coop---20112006.shtml?&print=1> (Accessed:10.12.2014)

UDC 639.22/639.2.052

Fishing tension arcs in the Russian Arctic



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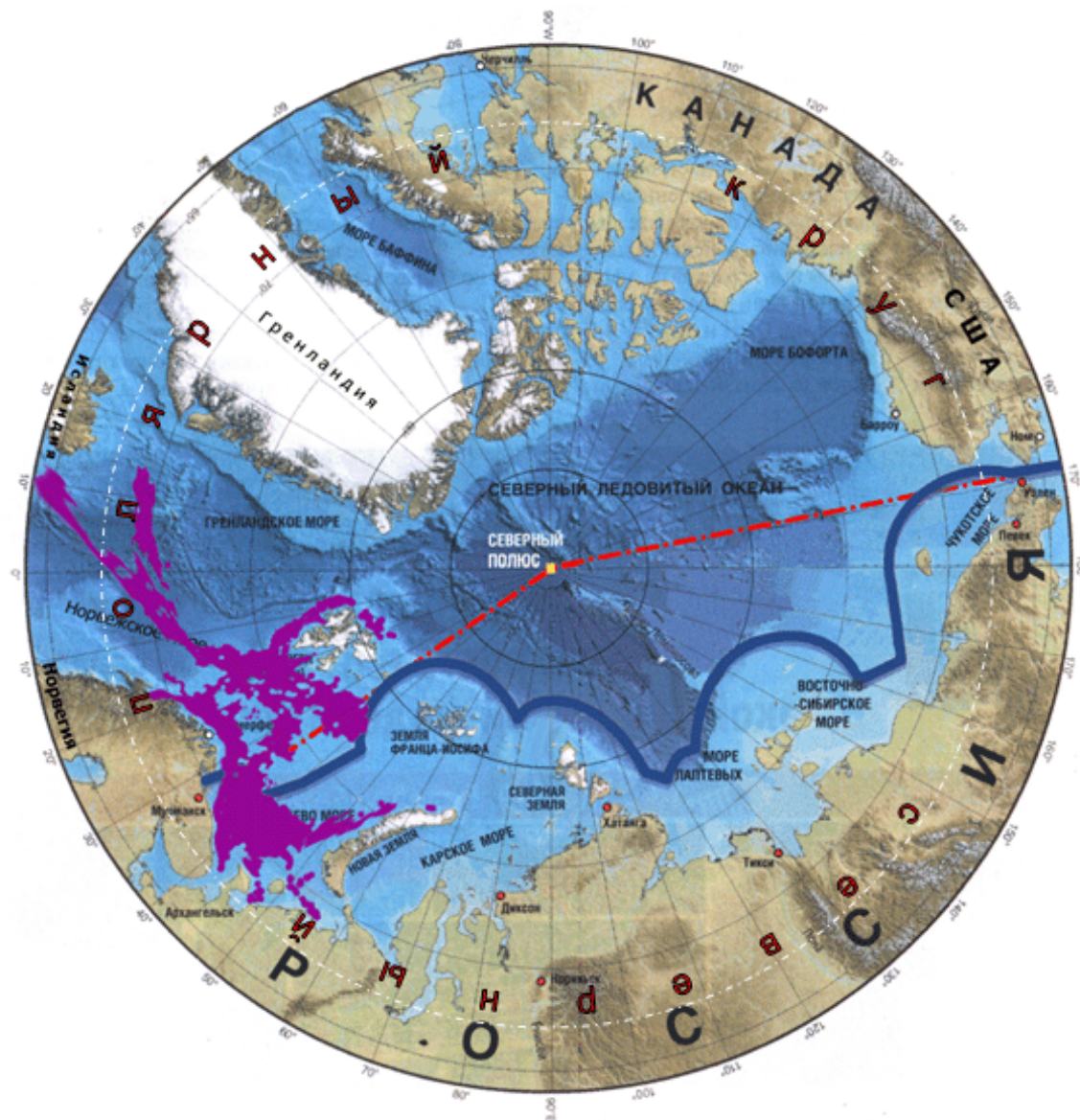
Abstract. The author of the article comprehensively examines the current situation, problems and possible solutions related to fishing in the Arctic. Changes in the Arctic will undoubtedly affect fisheries. In this regard, the author analyses the "hot spots" of economic activity and international relations — fishing tension arcs in the Russian Arctic, as

well as the internal problems of the marine resource use.

Keywords: *Arctic, fisheries, the Barents Sea, the fishing tension arc, Norway, Svalbard, the United States, "ice bag", marine resources, ships*

Changes in the Arctic and their impact on fishery

The Arctic, according to common views, includes the maritime areas of the Arctic Ocean, with its seas: the Greenland, Norwegian (partly), the Barents, White, Kara, Laptev, East Siberian, Chukchi, Beaufort and Lincoln. These marine spaces have their center in the Northern geographic pole, the southern boundary — coasts of the five Arctic states: Denmark (Greenland), Canada, Norway, Russia, the United States and form the Arctic. Addressing issues of fisheries in the seas of the Arctic Ocean, the Russian fishery in the 200-mile EEZ, covering the coast of five Arctic territories of the Russian Federation: Murmansk and Arkhangelsk regions, Krasnoyarsk Territory, Nenets, Yamal-Nenets and Chukotka Autonomous Okrug (Pic.1).



Picture 1. The actual deployment of Russian fishing vessels on data for the years 2012-2013 (purple shading); 200-mile EEZs of Russia in the Arctic (blue line); Polar Russian possessions in 1926 (dashed red) and the boundary of the Arctic Circle (dashed white)

Fisheries of Kaliningrad, Leningrad and Moscow regions whose vessels are registered and are fishing in the Arctic zone of Russia are in the focus of the article. In addition, the article takes into account the results of the home fishery in the 200-mile zone of other Arctic states (under intergovernmental agreements) and outside — in the open waters of the Greenland, Norwegian and Barents seas where fishing is carried out in accordance with the recommendations of intergovernmental regional fishery organizations.

The Arctic waters were the arena for complex processes during the past decade. The changes occurred in the Arctic, including the Barents, Norwegian and Greenland Sea, are shown in Pic. 2.

Что меняется в Арктике, включая Баренцево, Норвежское моря ?

- Климат;
- Введены границы 200-мильных исключительных экономических зон;
- Определяются пределы границ континентальных шельфов;
- Принимаются арктическими государствами национальные доктрины, политические цели по использованию природных ресурсов и охране окружающей среды, безопасности;
- Расширяется разведка и использование углеводородного сырья на континентальном шельфе;
- Стремление к устойчивости в использовании морских живых ресурсов рыболовством;
- Увеличивается научный, экономический интерес к Арктике неарктических государств;
- Набирает силу конкуренция, соперничество как среди приарктических государств, так и между последними и другими неарктическими государствами за сырьевые ресурсы.

Picture 2. Changes in the Arctic.

All of these processes in varying degrees affect home fisheries in the Arctic region. But, in my opinion, the greatest impact on fisheries has the climate change and the differentiation of the 200-mile zones (EEZ) and the continental shelf between Russia on the one hand, and neighboring states — Norway, USA, Canada and Denmark (Greenland) — on the other. Significant impact on national fishery has the competition for the use of the marine resources, as well as the race for hydrocarbon exploration and development on the Arctic shelf.

Fishing is one of those kinds of socio-economic activities, which have been traditionally carried out in the Arctic, mainly in the Barents Sea, the Greenland Sea, the northern part of the Norwegian Sea, and to a lesser extent in the White Sea. The southern boundary of the Arctic fisheries is the Arctic Circle. In this area, the Russian fishing fleet annually produces 1.2-1.3 mln tons of biological resources worth about 80-100 billion rubles per year. In other seas of the Russian Arctic the fishery is carried out near the coastline — local population does it in pre estuarine waters; the amount if fishing is 10-15 thousand tons per year; and it is used for local consumption. In 2009 the future annual amount of fishery in Russia up to the year 2020 was expected to be about 6.7 mln tons, including in the EEZ of the Russian Federation — 3.4 mln tons¹.

¹ URL: <http://www.garant.ru/products/ipo/prime/doc/2068101/> (Accessed: 20.03.2015)

General reserves, transboundary stocks of marine resources in the Arctic include the polar cod (*Boreogadus saida* (Lepechin)) and capelin (*Mallotus villosus* (Miiller)) which have a circumpolar distribution and represent poorly isolated populations in some marine areas. The catch of capelin and polar cod is carried out only in the Barents, Greenland, and Northern Norwegian seas and in the waters of the Spitsbergen archipelago. In some years the fishery is possible in the Kara and White seas. The annual catch of these fish is defined by a condition of stocks, oceanographic conditions and the demand of the market. In some years the total catch of the arctic fish reached 2 million tons per year. Currently it does not exceed 300-450 thousand tons, and in some years — no more than 150 thousand tons ².

Other important kinds of fish caught in the Arctic zone of Russia and in the marine areas limited by the Arctic Circle is cod, haddock, herring, blue whiting, mackerel, halibut, perch and etc. Their importance for the commercial fishery is large and their total catch is up to 3.0-3.5 million tons per year ³.

Today large scale fishing is only conducted in the Barents Sea, the Greenland Sea and the Norwegian Sea, where during certain periods there is produced up to 4.5-4.7 mln tons of fish annually, while the catch average here was 2.6 mln tons per year in the past 55 years [1]. The regular fishery in this area is carried out by Norway, Russia, Iceland, the Faroe Islands, Greenland (Denmark) and a number of EU countries. In the other seas of the Arctic fishing have been done in very limited volumes and mainly by the local coastal population for their own consumption.

After the introduction of the 200-mile exclusive economic zones in the Arctic Ocean and its eleven seas: the Barents, White, Kara, Laptev, East Siberian, Chukchi, Beaufort, Lincoln, Baffin, Greenland and Norwegian (its northern part) a huge circumpolar enclave appeared. This so-called “ice bag” area of 2.8 mln km² is equal to two Barents Seas. With the melting of ice this area is becoming more available for fishing not only for the Arctic states, but for all the other states if they provide they follow the relevant provisions (for opened areas) of the UN Convention on the Law of the Sea adopted in 1982.

Climate changes and possible melting of the huge ice sea area make the Arctic available for fisheries, research, exploration, extraction of hydrocarbons, expansion of shipping and other scientific and economic activity. It draws attention of non-Arctic states to the Arctic and causes suspicious attitudes towards the situation among the “Arctic Five”: Canada, Denmark (Greenland), Norway, Russia and the United States — members of the Arctic Council.

² URL: <http://www.nord-news.ru/topic/?mtopicid=584>(Accessed: 27.02.2015)

³ Ibid.

A number of researchers, mostly American, believe that the warming process is irreversible and by the year 2085 it will have led to the complete melting of ice not only in 200-mile zones of Arctic states, but also will open the central part of the Arctic Ocean, which is now a sort of “ice bag”. Another point of view is basically adhered to a number of Russian researchers, including experts of the State Scientific Center of the Russian Federation “Arctic and Antarctic Research Institute” of Roshydromet (St. Petersburg). Updated forecast makes the AARI Director I.E. Frolov and his colleagues say that instead of raising the temperature and reducing the ice cover in the Arctic until the complete disappearance of the seasonal ice in the Arctic Ocean, it is expected a lowering of the temperature and increase of iciness by the years 2030-2040 [2, p. 127].

As a rule, in periods of warming, the amount of most commercial species in the main areas of fisheries: Northwest Arctic, in the Barents, Norwegian and Greenland Seas. These are primarily the cod, haddock, perch, halibut, herring, blue whiting and etc. At the same time their range is expanding in the eastern and northern areas, it is especially relevant for the polar cod and capelin. Their migration to the adjacent waters of the Franz Josef Land archipelago and even to the Kara Sea should not be excluded. Arctic cod and capelin have circumpolar distribution, by the way.

Fishing in the main area, the north-western sector of the Arctic, is highly dependent not only on the fluctuations of the marine resources amounts, meteorological conditions, climate change, competition for resources between states, but also on the emerging legal regime here and, primarily, on the maritime delimitation between the neighboring Arctic countries.

Fishing tension arcs

In the Arctic, there are several contentious areas of interest in terms of fishing and conservation of marine resources that create tension in international relations. Every area has its own specialty and problems. The Line drawn between these areas on the map could be called the “Arctic fishing tension arc”. In the vast Arctic sea area of Russia the delimitation process has not been yet completed, especially in case of agreements with the United States on maritime delimitation in the Bering and Chukchi seas. Negotiations with Canada and Denmark regarding the limits of the continental shelf in the Arctic are ahead. Incomplete delimitation in the Arctic and its legal issues cause some tension when it comes to the economic activity, especially in areas with all year-round fishing and leads to the emergence of so-called “hot spots” in international relations and management [3, p. 33-34].

The Arctic zone of Russia could be divided into two main “fishing tension arcs”: the Western arc — Norway (Svalbard area, the boundary on the shelf) and the Eastern — the United States (not ratified Agreement on the delimitation, 1990).

In addition, in the central part of the Arctic Ocean the third “fishing tension arc” appeared. It is affecting the interests of not only the five Arctic, but also other non-Arctic states claiming to have economic activity in the Arctic. Possible release of Arctic ice created preconditions for the emergence of unregulated fishing by vessels of non-Arctic states. In the area of the high seas all states, Arctic and non-Arctic ones, can conduct research and fish according to the UN Convention on the Law of the Sea, 1982. Arctic states are actively discussing the possibility of intergovernmental agreement in order to prevent the development of the negative scenario and unregulated fishing in particular. Such an approach is in the interests of the Russian fisheries. It appears promising and timely for Russia to come up with an initiative to make a collaborative research on marine resources in the central part of the Arctic Ocean, freed from ice, by the Arctic states.

The most acute situation remains after the Agreement between Russia and Norway on Maritime Delimitation and Cooperation in the Barents Sea and the Arctic Ocean, signed on the 15th of September 2010. Some experts continue to express doubts about the validity of the decisions taken and let Norway to exercise its jurisdiction in the entire western part of the Barents Sea, which is most effective for fishing. At the same time there are problems in the fishery due to so-called “protected Svalbard fishing zone”, established in 1977. It is still not recognized by Russia, believing that such a move, made by Norwegians, is contrary to the provisions of the Treaty on Svalbard signed in 1920 [4]. For the first time in history of Russian-Norwegian fishing relations we can speak about the legal framework that led to the dependence of our fisheries in these areas from the Norwegian authorities. Primarily, this concerns the fishing areas in the waters close to the Svalbard archipelago.

In this regard, it remains an acute problem of ensuring the smooth operation of the Russian fishing fleet in the western part of the Barents Sea, including the area of Spitsbergen. Despite repeated Russian proposals within the SRNK, uniform fishing rules for these areas do not exist, as well as the agreement between Russia and Norway concerning the fishing control and sanctions in case of violation of the fishing regulations and a number of other provisions. “Analysis of the court decisions in Russia and Norway shows that the courts give different estimates for the legal status of the sea area near the Svalbard archipelago. At the same time, Norway delays the decision on distribution the Treaty on the Svalbard archipelago to the sea area” [5]. In this case, the maritime delimitation line is set far to the east from boundary of the polar lands Russia, as it was in 1926 (pic. 3).



The absence of solutions of this complex problem creates a vast field for conflicts between Russian and Norwegian fishermen regulatory bodies, strengthened by the Agreement signed in 2010. Thus, even after it, the Norwegian coast guard detained 12 fishing vessels with the flag of Russia because of different suspected acts of violating the alleged unilateral Norwegian measures regulating fisheries. A number of Russian vessels were arrested and forcibly escorted to the Norwegian ports for the proceedings in the courts of Norway. However, there are no intergovernmental agreements between Russia and Norway on such actions of the Norwegian authorities in relation to our fishing boats there. The question is: “What legal norms is Norway

provided with to control and detain fishing vessels with the Russian flag in the open waters of the Svalbard archipelago. And why the competent Russian authorities do not take measures to protect the home fishing interests?”

Another, no less important from a practical point of view, question of fisheries is resulting from the provisions of the Agreement signed in 2010. It is the refusal of the Russia from the part of the continental shelf in the area east of the border of the polar lands of Russia, established in 1926 and still relevant in the present. As I have repeatedly stated in various publications, Russia refused from a part of the continental shelf in favor of the Norway. Only in this area between 74° NL and 81° NL Norway got 80 thousand km² of continental shelf. Besides, in the long term perspective, the Russian fishery may be disposed in the eastern zone of the Barents Sea, in so-called “ice bag”, as the area has the increased ice cover.

Some articles, devoted to the consideration of provisions of the Agreement signed in 2010 and issues related to fishing, in my opinion, contain rather subjective data on Russian losses of the continental shelf areas [6]. Currently, in these areas and in the Barents Sea (outside the Russian 200-mile zone, where the shelf must be owned by Russia) we are able to observe unregulated and uncontrolled fishing of the snow crab. This marine biological kind refers to the “sedentary species”, which, in accordance with the UN Convention on the Law of the Sea of 1982, is under the sovereignty of the state — owner of the continental shelf. In other words, without the consent of the State, the owner of the continental shelf, no one can fish and research “sedentary species”. In this regard, the position of some Russian authorities is unclear when they are referring to the Agreement signed in 2010 and saying that these are the “open waters outside the 200-mile zone of Russia”. It seems to be logical then and ask an important question: “What was delimited by Russia and Norway in the area between 74° NL and 81° NL? And what is the significance of this boundary line?” The failure to settle the problem between Russia and Norway and its different interpretations by the Foreign Ministry and the FSB creates significant “stress” in the fishing areas in the North-West Arctic.

Of course, the final settlement of the problems discussed above and their proper legal decision won't remove the “arcs of tension”. However, the need to protect the home fishery in the Arctic and fight for a coherent policy, management, conservation and use of marine resources, as well as for the control of fishing by neighboring Arctic states.

Internal problems of the marine resource use

At the federal level, the main priorities and goals of the state policy in the fisheries are formulated in the Food Security Doctrine of the Russian Federation, approved by presidential decree, January 30, 2010 №120; Maritime Doctrine of the Russian Federation until 2020 approved by the Russian President, July 27, 2001; the Concept of Fisheries Development of the Russian Federation for the period until 2020, approved by the Russian Government, September 2, 2003 № 1265-p; and in other fundamental documents⁴. The federal budget support for the Russian state program “Development of the Fisheries Industry”, approved by the Government of the Russian Federation on the 15th of April 2014, amounts to more than 83.1 billion rubles⁵. However, the implementation of the state program is still doubtful due to the crisis and sequestration of budget.

In 2014 the total catch of fish in Russia amounted to 4.215 mil tons, which is 81.1 thousand tons or 1.9% less than in 2013. In the Northern basin it was nearly 570 thousand tons, which is also less than in the previous year (43 thousand tons less). Catches of cod amounted to 515.7 thousand tons (slightly more than in 2013), catches of haddock — 78.5 thousand tons (a decrease of 7.3 thousand tons). Catches of capelin fell significantly — 35.8 thousand tons and 25.7 thousand tons in total⁶. In the Kara, Laptev, East Siberian and Chukchi Seas large scale fishing is not done due to the lack of fish stocks and the climate peculiarities — low temperatures, ice and poor phytoplankton. Fishing in rivers does not exceed 10-15 thousand tons and it is used mainly to supply the local community.

In connection with expanding exploration, production and development of hydrocarbon in the Barents Sea, there is a threat of pollution of the Arctic environment and the negative impact on marine resources and fisheries. Therefore it is necessary to take special measures, aimed at protecting the Arctic environment and marine resources during the exploration and development of hydrocarbons on the Arctic shelf. In some parts of the shelf with spawning fish and high concentration of juvenile fish such activities should be prohibited.

In the Arctic western zone large scale fishing, carried out by Russian vessels, is done in accordance with the regulations adopted at the national level, as well as on the basis of agreements signed together with the neighboring states — Norway, Denmark (Greenland and the Faroe Islands) and Iceland and with the special attitude to the recommendations of international organizations — the ICES and the NEAFC. Control of fisheries in the Russian exclusive economic zone and on the continental shelf of the Russian Arctic is provided by the BS FSB. If Russian vessels

⁴ URL: <http://www.mcx.ru/documents/document/show/24302.htm> (Accessed: 21.03.2015).

⁵ Ibid

⁶ URL: ria.ru/economy/20150114/1042481155.html (Accessed: 15.03.2015).

fish within the 200-mile zones of other Arctic states — Norway, Denmark (Greenland and the Faroe Islands), Finland, Iceland and Canada, they are under control of the relevant authorities of the states. BS FSB carries out specific service function without appropriate experience and training, which leads to conflicts with the fishermen and “pressure” for business. It seems appropriate to transfer these functions to the Federal Agency for fishery, as it was before.

The fundamental legal acts on fishery in Russia are: the Federal Law “On fishing and preservation of aquatic biological resources”⁷ and Regulations on Fishery in the Northern fishing basin⁸. There are also some more adopted and developed legal documents but they require a number of amendments. Some amendments required on the status of “scientific” catches, coastal fishing, exploratory work to provide the fishing fleet with the resource base and exploration of new areas and target species. Payments for the use of marine resources in the Arctic region (such a rule is not present at any of the Arctic States) should be removed, as well as the delivery of the catch from the fishing area of Spitsbergen in the Russian ports⁹. These rules lead to the annual rise in the cost of fish products delivered from a remote from the Russian territories port of Spitsbergen up to 1.5-2.0 billion rubles. Every ship loses more than 4-5 days on delivery and the time to unload as well.

There are problems related to the modernization the fishing fleet. Russian fishing is done in the Arctic zone and it is based on the established total allowable catches (TACs) for the stocks of 120 units in a 200-mile exclusive economic zone of Russia, including to the Arctic zone. These TACs were set by national scientific institutions, taking into account the precautionary approach and the fishery is carried out with the traditional fishing gear: trawls, longlines, partly fixed and draft nets and other fishing gear. As I have noted earlier, 98% of annual catch is trawling one. The fishing is carried out by 350 different classes of vessels. However, 60% of vessels are over the age of 16-20 years¹⁰.

At the same time 78 ships in the North Basin are modernized and repaired, some of them were built and purchased abroad by Russian ship owners. All of these vessels sail under the Russian flag, and their owners are the Russian campaigns. However, when it comes to paying taxes (VAT and customs duties) they usually do not go in Russian ports, preferring to be unloaded, supplied in ports in Norway, or using transportation services directly from the sea. We are talking about the most modern and high-performance vehicles. However, they cannot be moored at the dock in their native town of Murmansk, because it is necessary to pay VAT and customs duties —

⁷ URL: <http://base.garant.ru/12138110/> (Accessed: 21.03.2015).

⁸ URL: <http://docs.cntd.ru/document/420233775> (Accessed: 21.03.2015).

⁹ URL: <http://morprom.ru/news/22347/> (Accessed: 21.03.2015).

¹⁰ URL: <http://tsuren.ru/wp-content/uploads/2014/09/rh-4-2104.pdf> (Accessed: 21.03.2015).

only 23% of the total value of the vessel. Ship owners have no such means, and to take credits with the existing rates is a strait way to ruin the business. As a result, these vessels are fishing, use our quotas, carry the Russian flag, and their owners are Russian companies and citizens of the Russian Federation but the vessels are supplied and unloaded in foreign ports, mostly in Norway. In addition, the level of service for our ships in the ports of Norway exceeds the level of service at the ports of Russia. If these vessels were supplied, repaired and provided with other services, Murmansk would have 6-7 billion rubles annually and 1 thousand of new working places¹¹. So, it also has an important social component. Coming back to the home port, the fisherman would see his family more often and the public would be able to see modern fishing vessels.

The issue of 120 ships that are not using the Russian ports in the Northern Basin and the Far East is solved by the introduction of certain conditions for fishermen. There are some legal changes preparing now for the draft of the fishery law and the draft of a bill for custom amnesty for such ships that may provide them with a zero rate for custom clearance. This was announced by the Deputy Minister of Agriculture and Head of the Federal Agency for Fisheries I.V. Shestakov during his visit to Murmansk in February 2015¹².

In general, in case of modernization and purchase of new vessels, the existing fishing fleet of the Northern and Western basins is capable to provide a full catch for national quotas for marine resources in the Arctic seas. However, it is important to start an accelerated upgrade scientific research, the creation of a search fleet for fishery research and monitoring of stocks, marine resources and the environment, not only in the Arctic seas, but also in the central part of the Arctic Ocean. It is necessary to construct new research fleet adapted to Arctic ice conditions. It should be noted that a number of Arctic states, Norway in particular, has already started the construction of such a lead vessel for complex research in the Arctic, including the study of marine resources. In specialists' opinion is much more profitable to construct modern ships than to import the fish. It is extremely necessary and beneficial for the national food security to invest in the development of Russian fishery fleet [7, p.5].

Conclusion

In conclusion, it should be noted that the changing climate in the Arctic creates the preconditions for the expansion of economic activities, especially fishing, in the 200-mile zones of the five Arctic states — Russia, Canada, Norway, Greenland (Denmark) and the United States, and

¹¹ URL: <http://www.fishkamchatka.ru/?cont=long&id=52701&year=2015&today=02&month=03> (Accessed: 21.03.2015).

¹² URL: <http://severpost.ru/read/21627> (Accessed: 21.03.2015).

in the ice free area of the Arctic Ocean, situated outside these economic zones. It seems to be possible that the central areas of the Arctic Ocean will be free from ice and this might lead to migration of fish interesting for commercial fishery (Arctic cod, capelin, black halibut, cod, seals, etc.).

In order to prevent unregulated fishing in the central part of the Arctic Ocean Arctic states: Canada, Russia, Denmark, Norway and the United States should to:

- a) establish a fund and adopt a program of scientific monitoring of the central part of the Arctic Ocean;
- b) start to develop an intergovernmental treaty (agreement) on the management of marine resources in the central part of the Arctic Ocean and their preservation;
- c) carry out experimental scientific fishery in the central part of the Arctic Ocean basing on scientific advice and monitoring of marine resources taking into account the environmental aspects of research, fishing and the vulnerability of the Arctic environment.

Arctic states are in need of strong diplomatic actions aimed at solving the existing problems in the areas of the “fishery tension arcs” in the Arctic and help to build trustful relationships between them.

Taking into account that a large part of Russia's 200-mile zone of the Arctic has recently become free from ice for a long time during the year, it is important to proceed with the construction of a special research fleet to carry out comprehensive research in these areas.

In order to improve the efficiency of the fishing fleet in the Arctic zone and to increase its contribution to food security of the country, it is necessary to remove the existing administrative barriers, including so-called “non-mooring vessels”, and to create the right conditions for efficient service for fishing vessels in Russian ports, which should be better than foreign seaports.

There is no doubt that further improvement of the legislation in the field of fisheries and its enforcement, as well as modernization of the fishery management in Russia, including the Arctic area and the Northern Basin, is needed. Successful solutions of problems in the Arctic zone of the Russian Federation and food security are largely dependent on the funding and implementation of the Russian Federation State Program “Development of the Fishery until 2020”.

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Arctic Regions' development problems and prospects (based on the expert survey)



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Abstract. The article presents the results of the survey made in Arkhangelsk, Murmansk region and Nenets Autonomous District. The assessment of the Arctic policy at the federal level and the evaluation of the system of support of the population of the Arctic are in the focus of the article. The authors reflect on the inter-regional cooperation, the Arctic regional policies and prospects of the region.

Keywords: *expert survey, politics, Arctic regions, the system of support of the population, prospects of development, inter-regional integration*

Introduction

Despite the radical change in the geopolitical situation Arctic vector of the development of Russia, is gathering pace. Last year, at the federal and inter-regional level there were many events related to the Arctic. Some of them could be regarded as strategic ones for the Arctic territories. In spring 2014 the state program "Socio-economic development of the Arctic zone of Russia until 2020" was adopted and President signed the Decree "On the land territory of the Arctic zone of the Russian Federation".

In fact, the adoption of these documents started structuring process for the Arctic policy and social space of the Arctic territories. In this regard, it is important to assess the opportunities and risks of the Arctic policy and to understand the most important and complex issues of the Arctic region.

In November-December 2014 NArFU Expert-Analytical Center together with the NGO "Revival of the Russian Culture" made a survey in the Arkhangelsk and Murmansk regions and the Nenets Autonomous District. The study involved 55 experts representing government, business, media, science, education and non-profit organizations. Participants were asked to answer questions regarding the state and prospects of the Arctic policy, media coverage of the Arctic

issues, prospects of cooperation in the Arctic, ways to support Arctic regions and populations of the Arctic zone, and other topics. Survey results are evaluated with the use of “regional affiliation of the expert” parameter.

Evaluation of the federal Arctic policy

It should be noted that most experts believe that the regulations on the Arctic zone of the Russian Federation (RFAZ), adopted in 2014, are insufficient and poorly worked out. Only the issues of the terrestrial part of the RFAZ we considered as worked out well by the participants of the survey. Meanwhile, even these issues got many comments. Thus, some experts believe that the Pinezhsky and Leshukonsky areas of the Arkhangelsk region were unfair “offended”. The areas do not have direct access to the sea, but are quite strongly linked to the Arctic (historically, geographically, culturally and economically). Some experts also expressed bewilderment due to the absence of the Republic of Karelia towns in the list of the Russian Arctic municipalities. According to the state program “Socio-economic development of the Arctic zone of Russia until 2020” it was claimed much more. Economics and social policy of the RFAZ were especially negatively evaluated by an expert on economic and social policy in the Russian Arctic, who stated that the program had poorly spelled management and implementation mechanisms and there were no financial resources for its full implementation.

It is noteworthy that few respondents noted an excessive bias in the Arctic strategy documents in the economic and industrial sphere, the residual approach to the social sphere. However, the position of the group of experts, who were convinced about the presence of this problem, was reasonable. Such a bias in the Russian Arctic policy could lead, in their opinion, to a slowdown development of the Arctic due to a lack of human resources and developed social infrastructure. Most clearly and precisely the problem was voiced by one of the experts, representative of the media: “It is very bad that the key to development of the Arctic is seen as a vast natural resource extraction. A man and his life in the Arctic, the development of the territories, preservation of culture and traditional economy, use of new technologies are left behind. But people, living in the Russian Arctic, are primarily interested in the normal infrastructure: the gas, clean water, airports, good roads, and other small aircraft. With this infrastructure, their efficiency would be much higher”. Thus, the idea of “habitation of the Arctic”, which is being actively discussed in scientific circles, has been accepted only by a small part of the expert community [1].

Experts’ ideas about the role of the different actors of politics and business in the development of the Russian Arctic are quite consistent. In their opinion, the federal government has

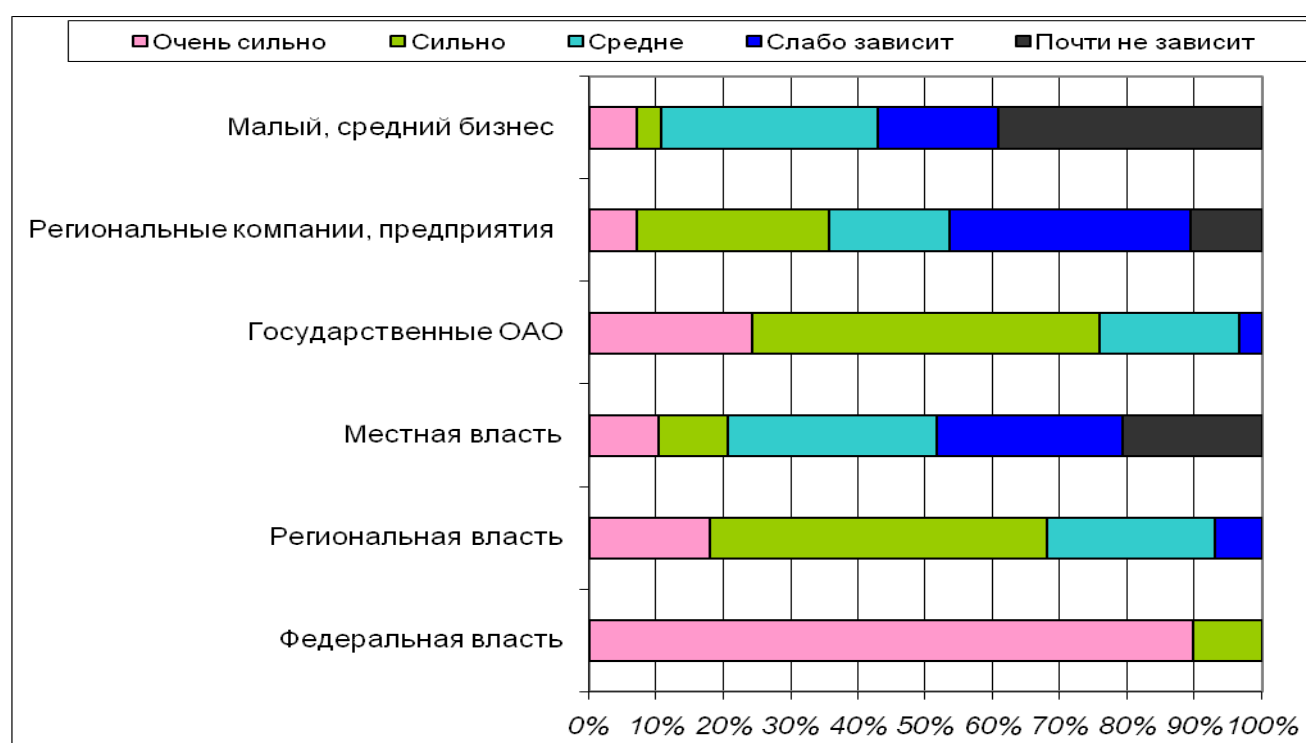
a general influence on the development of the Arctic zone of the Russian Federation. The role of other political and economic actors is auxiliary or insignificant. 90% of experts believe that the federal government is the most powerful agent of the Arctic policy. Indeed, the development of these areas of the country requires huge financial and serious administrative resources available only in the federal center. Regional authorities are noticeably inferior to the influence of the federal government. The value of the regional companies, local authorities, small and medium enterprises is valued as weak and very weak by experts. Many experts, such as representatives of mass media, noted that only the federal government has a real influence on development of the Russian Arctic.

However, in a study on the financing of the Arctic territories opposite viewpoint sounded: it is necessary to use business opportunities and international partners to support Arctic projects. If you only rely on the federal budget, the government will either be ruined or won't be able to fund other important social and economic projects.

The views of the expert community are clearly dominated by a centralized management model of Arctic territories. Evaluation of the politics and business effectiveness in the Russian Arctic is shown in diagram 1.

In your opinion, to what extent is the development of the Arctic zone of RF dependent on politics and business?

Diagram 1



Evaluation of the population support system in the Arctic regions

Participants were asked to evaluate the current system of indirect state support of the population of the Arctic regions, as well as to comment on the possible ways to develop this system. In fact, most experts acknowledged the current system of guarantees and support for the population of the Far North as insufficiently effective. Only 7% of respondents agreed with the idea to maintain the current system unchanged.

Table 1

How should the government support measures for the people living in the Arctic zone of RF be implemented?

State support measures	%
Special legal acts and support measures should be developed for people living on these territories	50
Support could be provided in accordance with the FL "About North", but with changes of norms	33
Support could be provide in accordance with the present Federal Laws	7
Other	3
Difficult to say	7

The disadvantages of the existing system are the following:

- ✓ wages for many sectors of the economy of the North are lower than in more favorable regions of residence. It is no longer an effective tool for attracting labor resources to the North;
- ✓ non-governmental organizations, small and medium business do not provide the "northern guarantees and benefits", so the workers in the public and private sectors, large and small businesses are at a disadvantage;
- ✓ the current system of benefits and guarantees is attractive to people of mature age and is not very interesting for young people (the key elements of the system - is an early retirement and increased pension, regional coefficient to the salary);
- ✓ increased social obligations of the business sector in the Arctic regions, increase its costs and thereby reduce its competitiveness;
- ✓ system of the "northern surcharges" violates the principle of social justice, and advancing incentives. After all, well-paid workers (in the public sector — status and mature aged employees) are using the regional coefficients and get much greater increase in salaries than younger and less experienced workers.

Experts disagreed about the transformation of the current system of support for the population. Representatives of the NAD, individual experts from the Arkhangelsk and Murmansk region believe that the support of the people of the Arctic regions should be implemented within the existing Federal Law "On State Guarantees and compensation for people working and living in the Far North and equivalent areas", but after changes in some of the norms. Probably, such a

negative attitude to radical changes in the regulatory system of the “northern guarantees and privileges” is caused by the fear that these actions might lead to a sharp deterioration in the social situation of the Arctic population. Approval, testing, introduction of new rules may take a long time. In addition, it is likely that due to the economic crisis, the new system will be introduced, taking into account the need to optimize expenditures. Therefore, we understand the position of experts from the NAD, who believe that it is better to correct the current system, especially in the financial self-sufficient regions, rather than risk benefits.

However, a significant part of experts believe that there should be a special law (in particular the Law “On the Arctic zone of the Russian Federation”) and specific measures to support the population of the Arctic regions. However many of experts could not prove this point of view. Possible arguments for this position can be taken from a number of materials of scientific conferences, held in 2012 and 2014:

- ✓ Arctic macro-region should be allocated as a separate object of planning, distinguishing between the concept of “Arctic”, “North” and “Far North”;
- ✓ it is advisable to change the “Soviet” approaches to social support of the population in the law on “North” and other regulations;
- ✓ need in serious impetus to the development of social entrepreneurship and social capital in the North [2,3].

Understanding the inter-regional cooperation

The survey results showed the importance of integrating the Arctic regions. Arctic territories have many common problems, extremely difficult to solve alone. However, the current level of inter-regional cooperation, in general, was recognized as satisfactory. For example, if the level of cooperation of the Arkhangelsk region and NAD was evaluated as the average, the Arkhangelsk and Murmansk region — below average, and the NAD and the Murmansk region — generally recognized as low.

According to some experts, Arkhangelsk and Murmansk have competitive relationship. They are associated but making attempt to take a leading position in the Arctic Euro-zone to receive larger resources and power. Moreover, some respondents noted that more aggressive policy is currently in the Murmansk region. To a certain extent this is due to Murmansk’s being insulted by neighbors who “have taken away” a number of important statuses (Northern Arctic Federal University was established in Arkhangelsk, the Scientific Center RAS on the integrated study of the Arctic is in Arkhangelsk and the city became the largest in the Russian Arctic).

However, there is a great potential of cooperation. According to experts, the interaction between the Arctic territories should be carried out both by the authorities and through

companies and public organizations. The experts noted transport, research, education and tourism among the most urgent areas of cooperation.

The majority of respondents stressed the importance of scientific and educational sectors for the development of the Russian Arctic. Arkhangelsk was usually called a possible training center for Arctic exploration and research center for the study of the Arctic in the European North of Russia. At the same time, St. Petersburg and Murmansk were considered as serious competitors of Arkhangelsk in this area.

Table 2

What cities of the European part of Russia could be centers for personnel training for the development of the Arctic?

Cities of the AZRF	%
1. Arkhangelsk	76
2. St.-Petersburg	69
3. Murmansk	59
4. Moscow	35
5. Severodvinsk	24
6. Syktyvkar	22
7. Petrozavodsk	19
8. Apatiti	19
9. Ukhta	19
10. Naryan-Mar	9
11. Vorkuta	7
12. Other city	2
13. Difficult to say	4

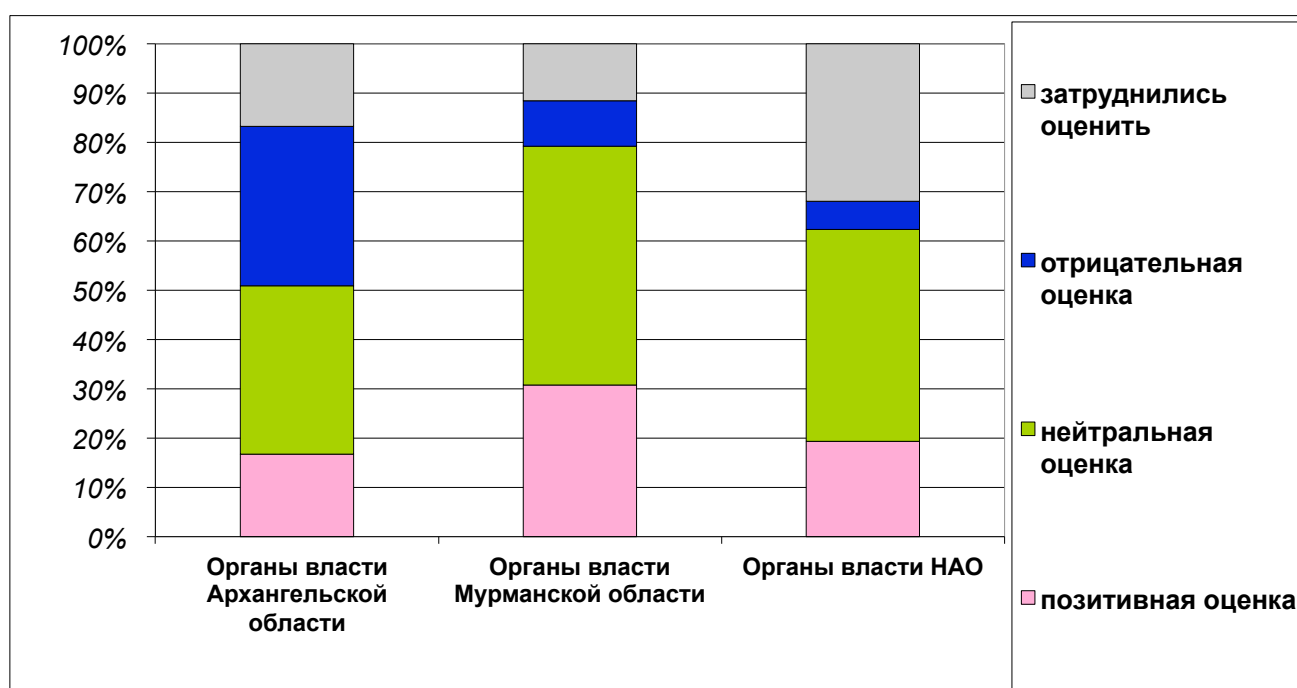
Understanding the Arctic regional politics and perspectives of the regions

The study has found significant differences in the views of experts on the role of their regions in the Arctic zone of the Russian Federation. Thus, the Arctic image of the Arkhangelsk Region is vaguer and less coordinated than the others. The experts mentioned the following roles of the Arkhangelsk Region: the Arctic educational and research center, a service and supply base for Arctic projects and a ship repair and shipbuilding center. Murmansk experts are more accurate and eager about their mission for the development of the Arctic. They see their region as a transport hub of the Northern Sea Route, a service-crossing point of the Arctic projects and the center of cooperation and scientific study of the Arctic. It is significant that many experts characterized Murmansk as “Arctic ambition”. No wonder they are more likely to point to the important role of the region and the city of Murmansk in the Arctic zone of the Russian Federation. Experts from the NAD have been more “earthy” in placing themselves in the Arctic region. In their opinion, NAD is the base for development and transportation of oil and gas in the Arctic.

The respondents assessed the activities of the regional authorities aimed at establishment and implementation of the regional Arctic policy, mainly as “satisfactory”. Moreover, if the Murmansk government and NAD received an average of more than three points (3.26 and 3.17, respectively), the Arkhangelsk region authorities got 2.65 points. It is noteworthy that the majority of experts have evaluated the work of the authorities of the neighboring regions higher than their own. Especially noticeable is the fact that the experts of the Arkhangelsk region have the higher imbalance of such assessments.

Diagram 2

Evaluating the efficiency of the governmental bodies of the Federation on the development and implementation of the regional Arctic policy



The expert community believes that the implementation of the policy of the Russian Arctic will impact positively on the socio-economic situation in the region only in the long term perspective. More than half of survey participants were agree with that. The main reasons for the delayed impact of the “Arctic vector” policy on life in the regions is the complexity of the Arctic projects, due to the absence of consistency in the actions aimed at Arctic exploration and development of Arctic territories, as well as the limited resources, which can be used in this area, especially in the current difficult economic conditions. However, in this regard certain regional differences are noticeable. Thus, representatives of the NAD were more optimistic about the prospects of the Arctic Region, while the Arkhangelsk experts were much more pessimistic about the future of their region.

Table 3

In your opinion, how the implementation of the RF Arctic policy could influence the social and economic situation in your region?

% by column	Experts of Arkhangelsk region	Experts of Murmansk region	Experts of NAD
will have positive effect soon	11	15	40
will have positive effect in the long term perspective	56	60	50
will have no effect	27	10	0
don't know, difficult to say	6	15	10
Sum	100	100	100

Thus, the expert community is cautiously optimistic about the “Arctic” future of their regions. At the same time, possible problems of implementation of the Arctic vector policy are associated with both external and internal factors.

The experts believe that the most promising industries in the North are geology, marine transportation, shipbuilding, oil and gas industry, construction, military sphere and mining. It is noteworthy that education, medicine, culture and ecology are in the bottom of the list. This can be regarded as a reflection of the federal Arctic policy primarily focused on the development of natural resources, the development of the Northern Sea Route and the militarization of the region.

The study has found strong dissatisfaction caused by discussion of the topic by the Arctic expert community. The respondents rather critically assessed the quantity and quality of discussions on Arctic policy by the expert community of their region. Most of them believe that the number of such events is not enough, and their productivity is minimal. This view is typical. Key to understanding the quality of activities is as follows: minimum discussions on conceptual approaches to the RFAZ development, superficial and formal discussions, minimum critical and analytic content, fragmented and inconsistent events, maximum emphasis on the development of natural resources in the Arctic and minimum one for the development of the Arctic territories.

The activity and the productivity Arctic region's media coverage were evaluated more positively. Moreover, many of experts indicated that the number of publications on this topic could be considered as sufficient. The majority of the interviewed representatives of the authorities, media and the experts from the NAD were agreeing with that. However, the quality of materials, their reliability and representativeness leaves much to be desired. Key to understanding the quality of media coverage of the Arctic topics is very similar to the complaints about the quality of expert discussions: superficiality, a low degree of realism, a high degree of pathos, unsystematic, poor vision of problems and ways to solve them, the minimum display of actual achievements and results, cut off from the life of people and weak link to the decision making issues.

The expert community believes that it is necessary to inform people, involve them in discussions on the prospects of the Arctic region, especially young ones, entrepreneurs, heads of organizations and enterprises, officials and journalists of the regions.

At the same time, the survey revealed two opposite approaches to the Arctic information policy. One part of the experts believes that the debate and media coverage of the Arctic exploration prospects and the development of Arctic territories are extremely important because they increase the attractiveness of the northern regions and contribute to improvement of the social well-being of the population. Therefore, the Arctic theme should be actively presented in the regional information space, even in an embellished form. It should be noted that this position is actually supported by the governor of the Murmansk region M. Kovtun in her speech at the Gaidar Forum [4]. The other group of experts defends the opposite point of view. They are sure to be very careful to discuss the Arctic theme. According to them, the dissonance between loud promises of virtual real prospects and modest achievements may cause irritation and frustration, especially among the “creative” people of the North. Therefore it is necessary to adhere to the principle of “less information, but more reasonable and realistic one”.

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Revisiting the question of the Russian Arctic policy making



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Abstract. The author discusses the main stages and key documents that have established the Russian Arctic zone as an independent object of the state policy and analyses current issues of the Russian Arctic policy making. It was decided to avoid the clear separation of stages in the

policy making process due to the fact that it was not possible to determine the equivalent differentiation criteria. The chosen approach has allowed to achieve certain goals and to draw conclusions about the dynamics of the Russian Arctic policy making, its key points, the meaning and significance of adopted legal acts.

Keywords: *Arctic zone of the Russian Federation, the state, politics, key events, fundamentals, management, strategy, legal acts*

Introduction

Waves of interest towards the Russian Arctic policy could be observed in 2007-2008 and 2013 after the end of the expedition “Arctic-2007”, when the Russian flag was placed at the ocean bottom and “Principles of State Policy of the Russian Federation in the Arctic for the period up to 2020 and beyond” and “Development Strategy of the Arctic zone of the Russian Federation and the national security for the period up to 2020” were approved and analyzed by Russian and foreign experts and journalists. In terms of foreign policy, these documents clearly identified priorities, goals and objectives of Russia in the Arctic. On the other hand, the adoption of these documents was only a first step towards established state policy in the region. In 2014 this process was continued by the publication of the Presidential Decree “On the land territory of the Arctic zone of the Russian Federation” and the state program “Socio-economic development of the Arctic zone of the Russian Federation for the period till 2020”. At the same time we cannot say that the Arctic was forgotten periphery of the country after the collapse of the Soviet Union. It should be noted that the achievements of the Arctic policy during 1990s were relatively modest and fragmented. The aim of this study was to show the evolution of the Arctic Policy. Achieving the stated goal was made possible by the consideration of the key events, analysis of key documents, emerging Arctic policy issues, and consideration of prospective of this area, which allowed us to estimate the speed and efficiency of efforts made by of state bodies in order to

establish and provide the Arctic policy of the Russian Federation, as well as to see the real prioritization, its difference from the legal statements.

The study was started from the search and selection of legal acts adopted by the federal government between 1991 and 2014 with respect to the Arctic theme. A tendency of a sharp increase in the number of legal acts with references to the terms “Arctic” and “Arctic zone” revealed itself in the second half of the 2000s. At the same time, the Russian Federation has more well-established legal concept of “Far North”, which means the land areas in the high latitudes and is exclusively used in connection with the benefits of the local population of these lands. It was decided not to define separate stages of establishment of the Arctic policy due to the fact that it is not possible to determine the equivalent criteria for its differentiation¹. It is much more important to review the key events affecting the Arctic policy, which allowed to start with the specific conclusions on the individual units and move to generalizations covering large time intervals and taking into account the context of the Arctic policy establishment.

Arctic vector is one of the most relevant issues of the Russian home policy. Appeal to the study of these issues, which are finally coming to their implementation, may provide food for thought about the forecasts, the dynamics of its development in the future. Active and increasingly intensifying attention of officials reflects the priority of the region and requires a very careful and responsible approach to identifying and solving its problems.

Establishing the Arctic policy of RF

In the 1990s, the situation in the Russian Arctic as a whole was characterized by the presence of the same problems as in the country as a whole. The privatization of enterprises led to the disintegration of the NSR economy, industrial decline and outflow of people, especially skilled workers. These tendencies remain typical for the northern territories. The results of the comprehensive studies done in 1980 showed the effectiveness of the Soviet program-target approach to the problems of regional development in the harsh climate, but were not very applicable for the transition market economy and absence of mobilizing centralized management system [1]. Despite this, the government actively took over regulatory, institutional and international aspects of the regional design.

During this period, the federal elite regarded the Far North as an important resource and conducted the policy of state protectionism [2]. Since 1991, all the issues related to the scientific,

¹ Alternative point of view is presented in the article by Tamitsky A.M. Gosudarstvennaya politika sovremennoi Rossii v Arktike: etapi, prioritety i nekotorye itogi [State policy of contemporary Russia in the Arctic: stages, priorities and some results]. *Arctic and North*, 2012, no.6, pp. 110-118.

economic, social and environmental activities in the Arctic were the jurisdiction of the State Commission, and then since 1992, the Interdepartmental Commission for the Russian Arctic and Antarctic (abolished in 2004). The Commission was aimed at developing the proposals on strategy of public activities of the Russian Federation in the Arctic and Antarctic. Throughout the '90s there existed State Committee on Northern Affairs (Goskomsever) in Russia. It was the independent federal executive authority and then a part of the Federal Ministry of Regional policy. In the end, this body was abolished by Presidential decree in 2000. In addition, in 1992 All-Russian Scientific Coordination Center for Complex Problems of the North, the Arctic and the livelihoods of indigenous peoples of the North was established. In 1994, the Federation Council created the Committee for Northern Affairs and Indigenous Peoples. Thus, we were facing the institutional uncertainty, attempts to preserve the continuity of the Soviet management system. In a difficult political situation of 1990s and presence of more pressing problems, it was difficult to count on the fast establishment of the state Arctic policy.

At the same time, first documents relating to the socio-economic development of the North appeared: the federal law "On the basis of the state regulation of social and economic development of the Russian North", repealed in 2004. In 1997, the Government adopted a decree "On the reform of the system of state support for the northern regions". The main objectives proclaimed were the creation of favorable conditions for life and economic activity of northerners and indigenous people as well, and to increase the effectiveness and public support.

In 1992-1996 the Russian Federation became a member of key international and regional organizations, the Arctic Council and the Barents Euro-Arctic Region as well. In 1997 the UN Convention on the Law of the Sea was ratified and Russia immediately started to prepare a formal presentation on the Limits of the Continental Shelf to the UN Commission (Federal Law "On the Continental Shelf" was adopted in 1995). In 2001, the application was sent to the Commission, so Russia demonstrated its commitment to the UN Convention (1982) and it become the legal foundation for the delineation of the Arctic spaces and brought Russia closer to the positions of other Arctic states. On the other hand, it actually meant a turn from the concept of sectoral differentiation in the Arctic (1926) to the conventional approach that made it difficult to protect and promote the national interests of Russia in this region. Such a rush could only be justified if Russia intended to develop oil and gas fields located in the northern seas strait after these events [3].

In 1998 new federal laws appeared: "On the inland waters, territorial sea and contiguous zone" and "On exclusive economic zone of the Russian Federation". In 1999, a draft of the federal law "On the Arctic zone of the Russian Federation" was introduced. Its focus was made on social

benefits for of the population and tax incentives for business. The draft defined the geographic boundaries of the Arctic zone and proposed the principle of differentiation of the state policy taking into account their specific features of each territorial unit. That federal law was not adopted and the southern land borders of the Arctic zone of the Russian Federation was identified in 2014 by Presidential decree. Up to this point, we can say that the policy of the Russian Arctic remained without an object for particular legislation.

Analysis of the documents mentioned above, as well as state policy in the region as a whole during the 1990s, shows that the attention was paid to solving the most pressing social and economic problems and prevention of social crisis. State exercised more sporadic interest in the region, while Arctic policy had revealed itself as a necessity, but its establishment took a lot of time. The lack of a unified concept may be fully explained as a lack of material resources for its implementation and consensus of the national elite aimed at solving the most acute problems. Speaking about the foreign policy of the Russian Federation, it should be noted that during this period the Arctic theme did not become a subject of global international political discourse. Russian claimed its role of a key player in the international politics and was actively involved in the establishment of regional intergovernmental organizations and bilateral relations and was generally regarded as an essential participant in Arctic cooperation.

Since the beginning of the 2000s and elections of the new Russian president, there have been seen significant changes in the state policy in the Arctic based on a clear understanding of national interests. Speaking at the meeting on the Northern Sea Route and shipbuilding in Murmansk in April 2000, V.V. Putin said that the "northern territories still are huge, undeveloped space. This is our strategic reserve, not only for the next century, but also in the longer term perspective. It cannot only be, but must become a reliable support for the development of Russian statehood, our significant foreign economic and foreign policy argument"². First of all, it should be noted the emergence of the basic documents, such as the Maritime Doctrine of the Russian Federation for the period until 2020, where the significance of the Arctic regional policy "is determined by the particular importance of ensuring the free exit of the Russian fleet to the Atlantic, the wealth of the exclusive economic zone and continental shelf of the Russian Federation, the decisive role of Northern Fleet in the defense of the state from the possible marine threats, as well as the growing importance of the Northern Sea Route for the sustainable development of the Russian Federation ". The role of the Arctic in the national security of the country is outlined in the National Security Concept (2000) and Presidential Decree "On the

² URL: <http://news.kremlin.ru/transcripts/21346> (Accessed: 20.12.2014).

National Security Strategy of the Russian Federation until 2020". In particular, the development of the Russian Arctic is linked to the issue of border security, increasing economic competitiveness, improving the efficiency of fuel and energy complex and the use of public-private partnerships.

In June 2001 the government approved a draft "Fundamentals of State Policy of the Russian Federation in the Arctic" and sent to the President. The draft stated: "taking into account the special interests of Russia in the Arctic and its specificity, it is necessary to provide more strict government regulation and the priority of existing problems"³, at a government meeting it was decided to examine the feasibility of creating a Governmental Commission on the Arctic. Also in the 2000s there was a series of other documents related to the exploration and development of the Arctic. It should be noted that from the very beginning of the presidency of Vladimir Putin Arctic topics gained a great importance and the Arctic related issues were mentioned in the course of parliamentary hearings and meetings at the highest level, in the speeches of the President and the meetings of the Security Council. However, a summary of the state of Arctic policy of the mid-2000s is to be found in the words of the deputy chairman of the Federation Council Committee on International Affairs G.T. Khripel. During the parliamentary hearings on the topic "The Arctic is a region of global cooperation in the implementation of the Russia state policy" in October 2004 he said: "To sum up all the work carried out since the 1990s, it can be characterized as follows. Funding was not appropriate, parliamentary work has not been done properly, those government programs which we have today, and even laws, programs for the development of socio-economic opportunities in the Arctic are fulfilled to some small fraction of percent" ⁴.

Analyzing the evolution of the Russian Arctic policy it is impossible to ignore the "Concept of sustainable development of the Arctic zone of the Russian Federation", introduced at the meeting of the expanded board of the Ministry of Regional Development of the Russian Federation in 2006. Fundamentally new element of this document was the offer of functional definitions for following areas of the Russian Arctic: the special areas of public interest, areas of new development, the old development zone, old-zone areas, and areas inhabited by indigenous peoples of the Arctic ⁵. The document contains paragraphs on ensuring environmental safety and calls it a mandatory component of the transition to sustainable development [4, p.40].

In 2008, after a meeting of the Security Council of the Russian Federation, President D. A. Medvedev approved the "Principles of State Policy of the Russian Federation in the Arctic for the

³ URL: <http://www.mid.ru/bdomp/ns-dmo.nsf/a1c87897b58a9d2743256a550029f995/432569f10031eb9343256a6c004e5720!OpenDocument> (Accessed: 20.12. 2014).

⁴ URL: <http://archiv.council.gov.ru/events/parliament/item/14/> (Accessed: 21.03.2015).

⁵ URL: <http://www.regnum.ru/news/polit/592839.html#ixzz3MXMYO5II> (Accessed: 20.12.2014).

period until 2020 and beyond” (hereinafter — Fundamentals). This document addresses the issues of strengthening the borders, development of international cooperation, environmental protection, and development of socio-economic sphere. It reveals the national interests of Russia in the Arctic: the use of the Arctic region as a strategic resource base, preserving of peace and cooperation there, conservation of ecological systems and the use of the North Sea Route as a national transport artery. National interests defined the main objectives and strategic priorities of the state policy of the Russian Federation in the Arctic. Implementation of the State Policy in the Arctic was divided into three stages:

- i. 2008-2010: preparation of the application to substantiate the external border of the Russian Arctic; implementation of targeted programs and long-term investment projects.
- ii. 2011-2015: establishment of the external border of the Russian Arctic; restructuring of the region's economy and infrastructure development of the NSR.
- iii. 2016-2020: Transformation of the Russian Arctic into the leading strategic resource base of the Russian Federation.

On the one hand, the main objectives set out in the Fundamentals were intended to stabilize the northern border of the country and to provide the legal framework for the development of natural resources. On the other hand, it was aimed at overcoming the differences in socio-economic development between the Arctic territories and other regions of the country. Moreover, there was some controversy: the desire to preserve the Arctic as a “zone of peace and cooperation” and the strengthening of military security in the region [5]. In general, the Fundamentals could be considered as a response to new geopolitical situation in the Arctic after the Cold War, but more as an important document for home policy, aimed at stabilization of situation in the country and the economy in particular [6, p.107]. Such a document made Russia able to indicate its priorities in the international arena and to be engaged in the political process as an equal partner.

In February 2013 President approved the document — “Strategy for development of the Arctic zone of the Russian Federation and the national security for the period up to 2020” (hereinafter — the Strategy). The aim of the Strategy was to secure Russian national interests. In accordance with the Fundamentals, there were some measures planned (by chapters) to improve the system of public administration, the quality of life of the population, the development of the resources of the country, the Northern Sea Route and fishery. In addition, separate chapters were devoted to the development of science, technology, communication, environmental protection, international cooperation, military security and border protection. At the same time the greatest attention was paid to the Northern Sea Route and the quality of life of the population and it

indicates the presence of a large spectrum of problems in these spheres. The Strategy was planned to be implemented through the state program of socio-economic development of the Russian Arctic until 2020. Individual legal acts were supposed to fix the special status of the Arctic zone and its composition. The Strategy is now being implemented in two phases:

- i. 2013-2015: improving the regulatory legal framework; the establishment of coordination bodies at all levels; international legal formalization of the continental shelf boundaries; the establishment of the Coast Guard of the FSB; the creation of informational and communication infrastructure; development of the environmental monitoring system; scientific research; measures of state support of traditional sectors of the local economy.
- ii. 2015-2020: exploration of mineral resources, the development of border infrastructure, the development of an integrated security system; the establishment of a space system "Arctic"; infrastructure development of the NSR and reducing the negative impact on the environment.

In order to establish the control over the implementation of the Strategy it is planned to allocate the Arctic zone as an independent object of statistical observation. The Strategy also provides a number of indicators to describe the socio-economic development of the Arctic. Control over the implementation of the Strategy is provided by the Government of the Russian Federation, which annually reports to the President. "In general, the document is good, systematic, and it provides a mechanism for further action, — commented A. Bagin. — But to implement the Strategy we must solve three main problems: to define the boundaries of the Arctic zone, to create a state program and to ensure the incorporation of the Strategy's points in other state programs, as well as in the departmental and regional programs"[7]. But not all researchers have considered the Strategy as a positive step. Against is the background of numerous of such documents "for all the good against the bad things" emerged in recent years [8, p. 65] and the point of view that the Strategy indicates the selection of too many priorities, unclear provisions and criteria and the lack of decision-makers. "This document cannot be the governing and normative. There is a strong suspicion that after a year no one will remember it" [8, p.66].

October 16, 2013. Chairman of the RF Government approved the Action Plan to implement the Strategy. The plan includes about 60 activities in priority areas. In addition, in October 2013 it established an interdepartmental working group for coordination and monitoring the implementation of the "Strategy for the development of the Arctic zone of the Russian Federation and the national security for the period up to 2020", headed by Minister of Regional Development I.N. Slyunyaev. The working group was aimed at the coordination and consolidation of efforts, analysis of its achievements and the report to the President, monitoring of the implementation of the Strategy and examination of investment projects.

April 21, 2014. The Government approved the state program “Socio-economic development of the Arctic zone of the Russian Federation for the period till 2020”. Work on the document was done quickly and its adoption was postponed due to the lack of funds in the federal budget. A significant negative factor was the composition of the program. It was actually presenting a set of sectoral policies that affect the Arctic. This was also reflected in the financing of the state program. Despite the fact that the text of the document was very similar to the previously adopted documents, it had more concrete actions with regard to the description of implementation mechanisms based on the frame-cluster approach — establishment of the support zones and selective development of public policy areas.

At a meeting of the Security Council on the 22nd of April 2014 President noted the following priorities for the development of public policy: creation of the body responsible for implementation of the Arctic policy; implementation of the state program of socio-economic development, full funding set to begin in 2017. No less important were the problems of the continental shelf boundary, development of the economic model of the Northern Sea Route, tightening of the environmental standards and strengthening of the military security ⁶.

May 2, 2014. President signed a decree “On the land territory of the Arctic zone of the Russian Federation”. The composition of the RFAZ territory consists of 4 regions of the Russian Federation and 16 municipalities: 1) the Murmansk region; 2) the seven municipalities of the Arkhangelsk region; 3) Nenets Autonomous District; 4) city district “Vorkuta” of the Komi Republic; 5) the Yamalo-Nenets Autonomous District; 6) the urban district of Norilsk, Taimyr Dolgan-Nenets Municipal District and the Turukhansk district of the Krasnoyarsk Territory; 7) five nomad camp (districts) the Republic of Sakha (Yakutia); 8) of the Chukotka Autonomous District; 9) as well as land and islands in the Arctic Ocean as it was defined in the Decree of the Presidium of the USSR Central Executive Committee on April 15, 1926 and other acts of the USSR. The need for establishment of the Arctic zone was determined by several factors: *first*, there was a clear zoning, necessary for the work of the local authorities; *secondly*, need to enable the collection and analysis of statistics; *thirdly*, to determine the specific measures of economic regulation in order to align the business environment with other regions and the integration of the region into a economic space of the country [9].

Unfortunately, in the May presidential decree Russia was only about land, but the Russian Arctic includes the waters of the Arctic Ocean and the White Sea as well. Thus, it was manifested the underestimation of maritime activities in the state policy and the establishment of the external

⁶ URL: <http://президент.рф/новости/20845> (Accessed: 20.12.2014).

borders of the Russian Arctic including the exclusive economic zone (EEZ) and the waters of the Northern Sea Route, which is of great geopolitical significance. Adoption of the Federal Law on RFAZ by the State Duma was delayed and the time of its adoption is not clear so far [10, p. 53-54].

The issue of creating a new state body (ministry or inter-ministerial committee) has been actively discussed in the media. Its creation was supported by S.E. Donskoy, A.N. Chilingarov and many other experts. The state did not have the necessary budgetary resources, so there was the "State Commission for the Development of the Arctic" created and now there is an opportunity to coordinate the efforts of various ministries to address the Arctic issues in different spheres ⁷.

Conclusion

Chosen approach enabled us to achieve the objectives of the study and to draw conclusions about the dynamics of the Russian Arctic policy establishment, its key points, the meaning and significance of adopted legal acts. In conclusion, I would like to present generalizing thoughts about unresolved issues and possible ways to overcome the shortcomings of the modern Arctic policy, based on the data of numerous sources and works of scientists and experts in various fields of study.

We cannot say that the development of the Russian Arctic policy is a smooth evolutionary path or revolutionary and not justified. Establishment of the state policy in the Arctic had varying degrees of intensity. It should be noted that the issues on the agenda of the Arctic considered within the point of view of the federal government, especially the issues of legal regulation or ensuring the development of the region. At the same time, it has been and still remains a significant problem of a low level of carrying out of the proposed initiatives, which leads to the fact that the key legal solutions do not work or do not fully operate. Establishment of the Russian Arctic policy is characterized by contradictory and inconsistency, while today we are still speaking about its conceptual and legal design.

Today we can confidently assert that Russia has finally completed the concept of the Arctic development. The analysis of the fundamental documents of public policy could make us conclude that the issue of the Arctic development has been comprehensively worked out. The important point here is to determine its status as a "strategic resource base, able to provide a solution to the socio-economic development of the country", so the Arctic should be awarded the national importance.

⁷ Statement on the Governmental Commission on the Arctic development issues. Adopted by the RF Government on the 14th of March 2015, N 228. URL: <http://government.ru/media/files/Cozw5FAxCGc.pdf> (Accessed: 23.03.2015). — Editor's note

The analysis suggests that the most important future activities may include: filing an updated application to the UN Commission on the Limits of the Continental Shelf (despite fears about the possibility of territorial disputes with Denmark and Canada, there is no doubt that such conflicts can be resolved at diplomatic level); functioning of the State Commission on the Development of the Arctic; oil and gas projects on the shelf in conditions of sanctions and search for new partners among the companies from non-Arctic countries (China, Japan, India, Brazil and South Korea). According to Y. Lukin, the key Arctic megatrends, providing a large-scale and most lasting impact on the situation in the Arctic, are: 1) environmental interdependence and Arctic solidarity; 2) Great redistribution of the Arctic: the struggle for space, communications and Arctic resources; 3) establishment of a Arctic multipolar model and the increasing activity in the Arctic. Thus ecological interdependence is defined as the quality of the "man-nature" relationship in order to preserve the environment, as well as the Arctic solidarity of human activity as the ability to engage in dialogue and negotiate the introduction of restrictions, standards and the rules of human behavior, business and government in the Arctic and the necessary balance between economy and ecology [10, p. 47-48].

Recommendations on the implementation of Russia's state policy in the Arctic could be the following: it is necessary to pay attention to the image of the Russian Federation in connection to the re-militarization of the region. It seems reasonable to associate the process with the prosecution of economic interests, rather than the existence of threats to the sovereignty, because it is profitable for the Russian Federation to strengthen the international cooperation, rather than to focus on the conflict with the other Arctic states. Ultimately, the militarization is fraught with growing threat near the northern borders of Russia. In the prevailing international conditions, foreign support for the development of bilateral contacts can bring our country better results than attempts to win the support of multilateral institutions.

The future of the Arctic is only possible with the sustainable development that can ensure the leading role of the Russian state. Only it is able to implement long-term capital-intensive infrastructure and technological projects aimed at creating a unified space for production services. This requires a more differentiated policy. In addition, the most important condition for success is the interaction of all the actors of economic and social development and cooperation at various levels: public-private, public, aboriginal, aboriginal- corporative and etc. This means the promotion and active involvement of regional experts in the development of legal acts and their enforcement. An urgent problem is the inter-regional integration of the 4 regions of the Russian Federation and 16 municipalities included in the Russian Arctic area. At the meeting of the

“Mercury Club”, President of the St. Petersburg Arctic Academy of Social Sciences V.Mitko suggested to create the Arctic Bank for Reconstruction and Development in order to attract investments to the region [11, p.25]. This initiative deserves further consideration by experts. However, when it comes to the financing the large-scale Arctic projects, their future depends on the success of extra budgetary sources of financing and public-private partnerships than the state. Perhaps this should be the main direction in the activity of the newly created State Commission on Arctic development.

One of the most pressing problems is to eliminate the backlog of the Russian Federation Research in the Arctic, especially mapping the terrain and the seabed, deep-sea drilling and seismic surveys. Monitoring and collection of statistics on the main indicators, possible after the definition of the land border of the Russian Arctic could be a powerful stimulus for all types of research, including humanitarian one.

On the one hand, Arctic geographical extent and its economic importance for the future make it logical to consider this area in terms of national security. But at the same time and it is absolutely essential in a changing world, to widen the concept of national interest, including personal dimension, sustainability of local communities and preservation and integration of small indigenous communities in its content. Alternatives to the development of the Arctic do not exist, so one needs to make the ideas, introduced in the legal documents, true.

"The outgoing 2014 has become a landmark for the Russian Arctic ... right now there are the first results of work, started many years ago — the first million barrels from “Prirazlomnaya”, discovery of large a deposit “Pobeda” in the Kara Sea, development of major infrastructure projects”, — said Minister of Natural Resources and Environment S.E. Donskoy at a scientific session of the general meeting of the Russian Academy of Sciences ⁸. Despite the crisis financial and economic situation and the pessimistic forecasts for 2015, the Russian Arctic policy has good prospects.

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Reviewer: Kharlampeva Nadezhda Klimovna,
Candidate of Historical Science, Associate Professor

UDC 303.03+314.17+332.14

Experience of integration of the Kola Scientific Center of RAS with Universities in solving complex problems of sustainable development in the Russian Arctic



© **Masloboev, Vladimir A.** Doctor of technical science, Professor, deputy chairman of the Kola Scientific Center, Russian Academy of Sciences

Abstract. Socio-economic circumstances in the Russian Arctic require high quality engineering and technical personnel. The article is focused on the analysis of the key factors that determine the situation, staffing problems and solutions of national interests of Russia in the Arctic. Specialists, able of the use theoretical knowledge and

practical skills in the Far North, socially adapted to the life in the Arctic, are needed. A set of measures aimed at promoting the engineering education, on the one hand, and retention of young people in the region, on the other hand, and the modernization of existing regional system of vocational education are required. The article reveals positive experience of integration of the Kola Science Centre (KSC) with the universities — basic departments of the universities and the institutions of the KSC, scientific and educational centers, and regional university-academic cluster, innovative partnership of science, education, government and business. The article focuses on the continuity of environmental education aimed to maintain the sustainable development, starting from kindergartens and ending up with school and university education.

Keywords: *Kola Science Centre, human resources for engineering, integration of universities and research institutions, the continuity of environmental education*

Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

Основные национальные интересы Российской Федерации в Арктике

(Указ Президента Российской Федерации от 18.09.2008 № Пр - 1969)

- ☐ -- Использование Арктической зоны Российской Федерации в качестве стратегической ресурсной базы Российской Федерации, обеспечивающей решение задач социально-экономического развития страны;
- ✓ -- Сохранение Арктики в качестве зоны мира и сотрудничества;
- ✓ -- Сбережение уникальных экологических систем Арктики;
- ✓ -- Использование Северного морского пути в качестве национальной единой транспортной коммуникации Российской Федерации в Арктике.

Основные удорожающие факторы Арктической зоны Российской Федерации:

- Удаленность от высокоразвитых экономических районов страны;
- Отсутствие надежных транспортных связей;
- Экстремальность природных условий, требующая крупных энергетических затрат;
- Гипертрофированная структура производства с высокой трудоемкостью и себестоимостью продукции;
- Высокий уровень экологических издержек;
- Высокие капитальные затраты на все виды строительства;
- Повышенные эксплуатационные затраты на содержание среды жизнедеятельности;
- Высокий уровень затрат на обустройство человека в Арктике.

Социально-экономический контекст

Программа РФ «Социально-экономическое развитие Арктической зоны Российской Федерации на период до 2020 года»: развитие Арктики – приоритетная задача.

Стратегия «2020/2025» Мурманской области: упор на кластеры и инновационное развитие

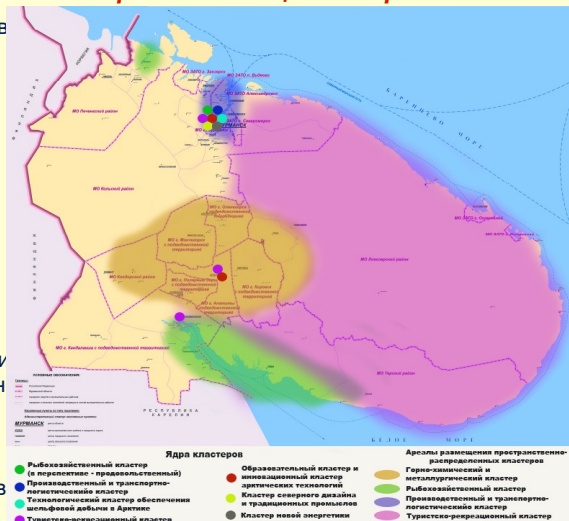
Промышленный потенциал Мурманской области – самый мощный в циркумполярном поясе – позволяет **позиционировать регион в качестве индустриальной площадки освоения Арктики**

Сложились предпосылки интенсификации **разведки и разработки природных ресурсов**, активизации механизмов воспроизводства ресурсной базы, внедрения новых ресурсно-сберегающих и энергоэффективных технологий

Реализация **транспортно-транзитного потенциала** обладает мощными мультипликативными и комплексно-формирующими эффектами для Мурманской области.

Наиболее развитая во всей Арктической зоне Российской Федерации **сеть образовательных учреждений** обуславливает дополнительное конкурентное преимущество Мурманской области.

Структура экономики Мурманской области, характерная для индустриального общества с преобладанием промышленно-сырьевого сектора, неизбежно **будет меняться и модернизироваться**



Приоритеты 1-го этапа Стратегии:

- разработка и реализация комплекса взаимосвязанных мер по предотвращению миграционного оттока населения;
- подготовка кадрового задела для реализации Стратегии.

Целевой образ региона: переход на инновационную траекторию устойчивого комплексного социально-экономического развития; превращение Мурманской области в один из стратегических центров АЗРФ.

Необходимым условием построения полноценной инновационной экономики является наличие полномасштабного промышленного комплекса регионов АЗРФ, определяющегося наличием:

- 1. Фундаментальной практико-ориентированной науки;**
- 2. Инновационной промышленности;**
- 3. Фундаментального развивающего образования.**

Реализация поставленных амбициозных задач невозможна без качественного инженерно-технического кадрового потенциала

Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

Для реализации устойчивого инновационного развития региона, укрепления существующих и освоения новых областей хозяйственной деятельности необходима качественная и стабильная кадровая база.

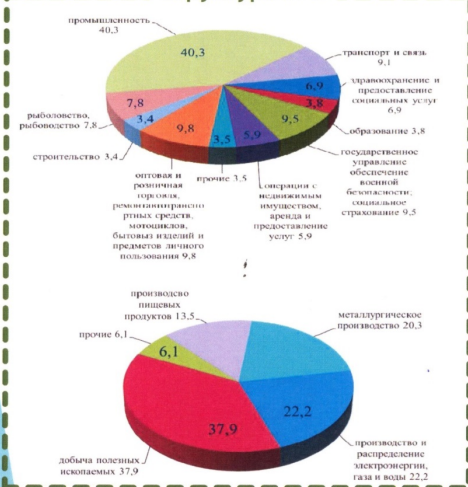
Нужны специалисты, знакомые со спецификой использования теоретических знаний и практических навыков в условиях крайнего Севера, социально адаптированные к жизни в Заполярье.

Квалификация специалистов должна быть достаточной для работы в условиях современных наукоемких высокотехнологичных производств.

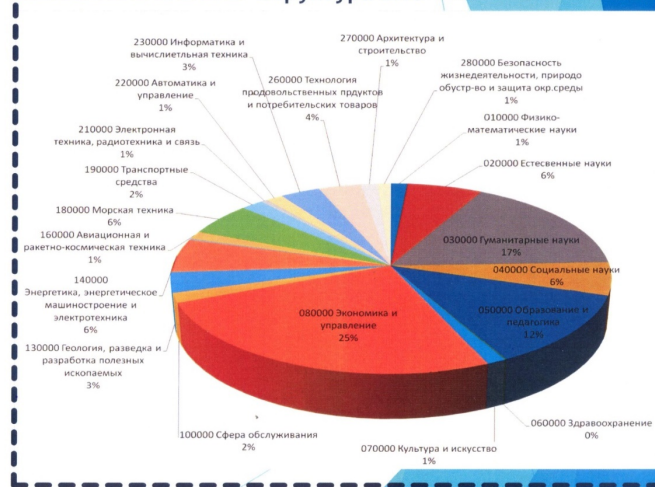
Нужны специалисты ментально ориентированные на охрану окружающей среды Арктики, нацеленные на экологизацию экономики и своей жизни в целом.

ВПО региона в проекции на структуру экономики

Структура ВРП

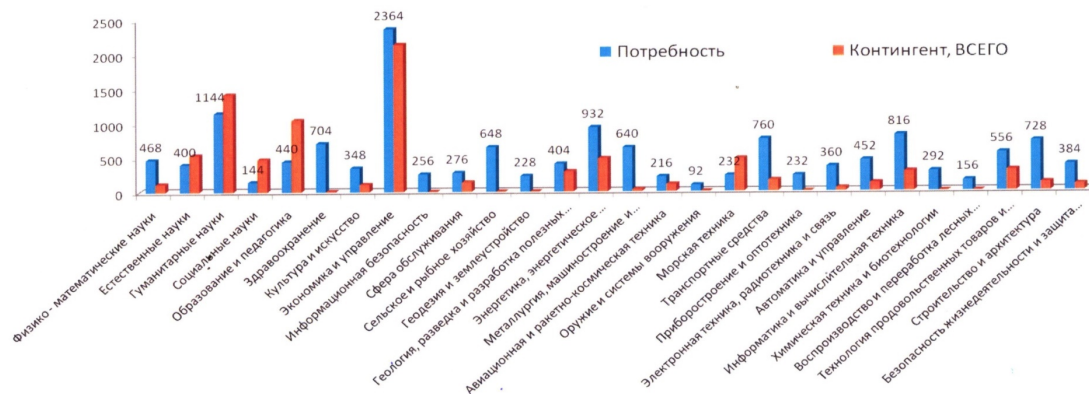


Структура ВПО



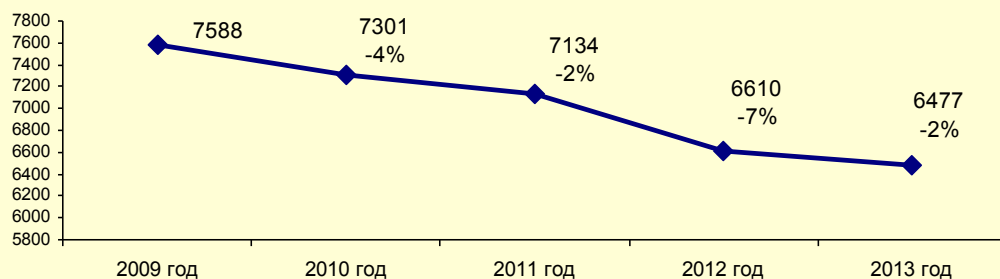
Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

ВПО региона в проекции на структуру кадровой потребности

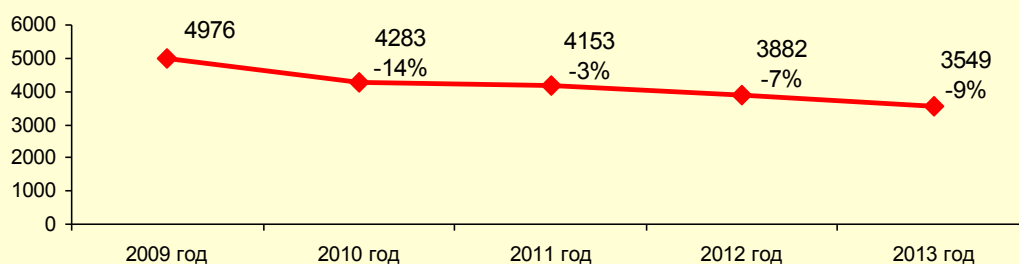


Динамика выпуска из школ Мурманской области

Количество выпускников 9-х классов в Мурманской области

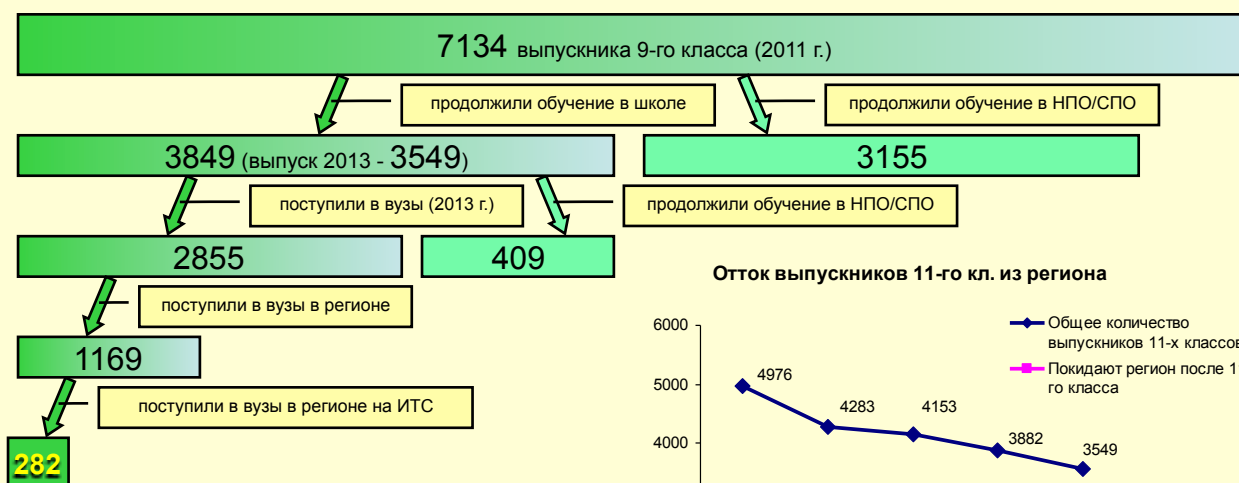


Количество выпускников 11-х классов в Мурманской области

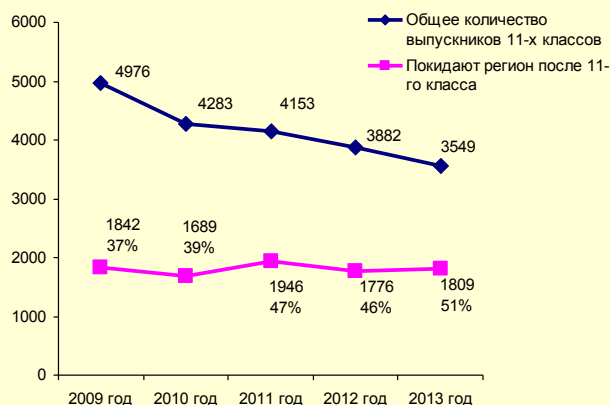


Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

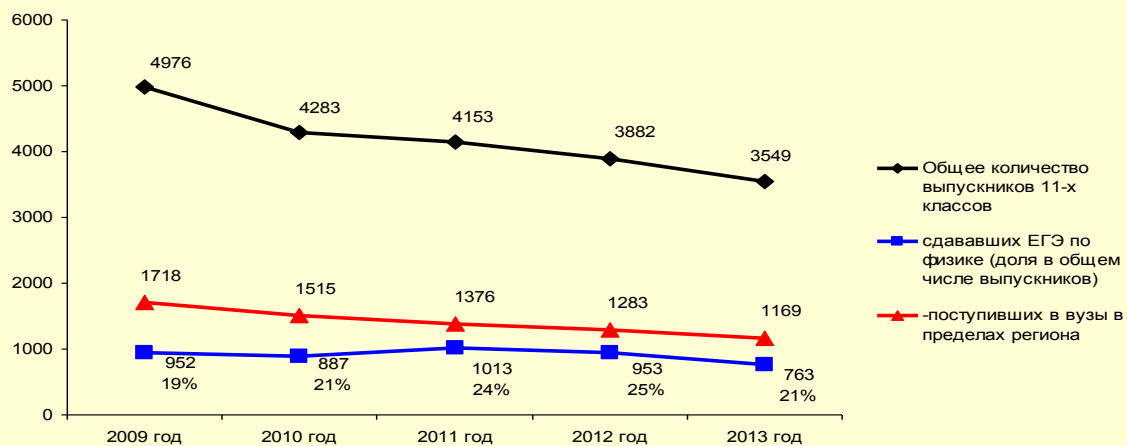
Распределение выпускников школ Мурманской области



Отток выпускников 11-го кл. из региона



Доля выпускников, остающихся в регионе, и выбирающих инженерно-технические специальности



Выпускники региональных ОУ профобразования – фактическая кадровая база для предприятий и организаций Мурманской обл.

Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

Обеспеченность региональной экономики кадрами ИТС



* - на основе прогноза кадровой потребности по ВЭД от облкомстата и методики прогнозирования по УГС от центра бюджетного мониторинга ПетрГУ (см. диссертационное исследование Щегловой А.Н.)

Необходим комплекс мер, нацеленных на популяризацию инженерного образования, с одной стороны, и удержание молодежи в регионе – с другой

Основные факторы, определяющие ситуацию:

- результаты ЕГЭ – главный критерий оценки школы; как следствие – противодействие со стороны школ массовой сдаче экзамена по физике;
- низкая привлекательность профессиональной карьеры в регионе;
- высокая доступность образовательных услуг в «центрах» на фоне ослабленной конкурентной способности регионального профобразования.

Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

Основные заинтересованные стороны и системные барьеры

Крупнейшие работодатели региона

Программы поддержки подготовки профессиональных кадров для корпоративных нужд:

- «Молодые кадры ОАО «Апатит»;
- «Профстарт» (Кольская ГМК).

Существенная часть лиц, задействованных в корпоративных программах профподготовки уходит на «свободный» рынок труда.

Учреждения профессионального образования

Учредители ОУ ВПО – федеральные. Успешность ОУ слабо зависит от его активности в решении региональных проблем. Обратная связь в контуре управления профобразованием – слабая. Спектр специальностей СПО плохо согласован с кадровой структурой работодателя.

Механизмы адаптации содержания профобразования к региональным нуждам (индивидуализация, практико-ориентированность, ...) не поддерживаются федеральным финансированием. Индивидуализация – «дорогое удовольствие». Выпускников СПО необходимо доучивать на рабочие или инженерные специальности.

Региональные власти

Государственная программа «Развитие образования» Мурманской области:

- «Высшего профессионального образования в регионе нет и не будет»;
- «Поднимем з/плату педагогам и все наладится само собой»;
- результаты ЕГЭ – есть цель регионального образования.

Несмотря на декларации, внятная кадровая политика в регионе отсутствует.

Развитие качественного инженерно-технического образования в регионе – в интересах всех сторон

-- Необходимо целенаправленно повышать привлекательность образования, трудоустройства и жизни в регионе. Нужна активная позиция региональной власти.

Основные направления действий:

- обеспечить сдачу ЕГЭ по физике максимально возможным количеством учащихся;
- создать условия для раннего (на этапе выбора места и получения и профиля профессионального образования) вывода молодых людей на профессиональную карьеру в регионе;
- мотивация региональных образовательных учреждений к обеспечению содержания образования, нацеленного на потребности региональной экономики.

Перспективы развития региона в инновационном направлении выдвигают новые требования к качеству кадрового обеспечения, удовлетворить которые существующая в области система профессионального образования не способна

Кольский филиал Петрозаводского ГУ	Один из крупнейших вузов региона. В основном обеспечивает потребности области в кадрах инженерных, экономических, естественно-научных, гуманитарных специальностей. Статус филиала ограничивает развитие. Социально-экономическая структуры Республики Карелия и Мурманской области существенно отличны; как следствие – различие приоритетов в области профессионального образования.
Мурманский гос.гуманитарный университет	Один из крупнейших вузов региона. Основной профиль - экономические и гуманитарные специальности. Недостаточная кадровая и материально-техническая база.
Мурманский гос.технический университет	Единственный полноценный технический вуз в регионе. Является ведомственным образовательным учреждением, что отражается на приоритетах развития вуза.
Филиалы центральных вузов	Решают лишь отдельные проблемы региона в области профессионального образования Не всегда достаточно высокое качество образовательных услуг



В реализации интересов России на Севере важную роль играет Российская академия наук:

- научная база освоения природных богатств;
- разработка и коммерциализация наукоемких технологий;
- комплексные исследования социальных, экономических, техногенных процессов;
- подготовка высококвалифицированных кадров.



Кольский научный центр РАН:

- 9 исследовательских институтов;
- более 400 докторов и кандидатов наук;
- мощная материально-техническая база;
- целенаправленные, глубокие и систематические исследования по наиболее важным для региона направлениям.

Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

Основные отрасли:

- горнодобывающая
- цветная металлургия
- рыбная промышленность
- энергетика
- военно-промышленный комплекс

Перспективные направления:

- освоение углеводородных месторождений шельфа Баренцева моря
- создание и развитие наукоемких технологий и производств по переработке сырья
- создание Центра нанотехнологий
- укрепление оборонного комплекса

Стратегические задачи:

- укрепиться в собственных границах;
- обеспечить экономическую, экологическую, техногенную безопасность;
- занять ведущие позиции среди стран евро-арктического региона;
- обеспечить эффективное использование природных богатств и геополитического положения Кольского Севера;
- создать условия для инновационного развития экономики региона.



КОЛЬСКИЙ НАУЧНЫЙ ЦЕНТР - ФОРПОСТ АКАДЕМИЧЕСКОЙ НАУКИ В АРКТИЧЕСКОЙ ЗОНЕ РОССИЙСКОЙ ФЕДЕРАЦИИ



Крупнейший в мировом Заполярье Академгородок
г. Апатиты

Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

СТАЦИОНАРНЫЕ БАЗЫ Кольского научного центра в Арктике



Дальние Зеленцы – ММБИ КНЦ РАН

МУРМАНСК - ПГИ КНЦ РАН



Barentsburg (78.08N 14.12E)



ШПИЦБЕРГЕН - БАЗА КНЦ РАН «БАРЕНЦБУРГ»

Полярно-альпийский ботанический сад КНЦ РАН –
крупнейшая в мире коллекция растений,
интродуцированных в Арктику



Город Кировск, подножье горы Вудъяврчорр

Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

Международное сотрудничество

КНЦ сотрудничает со 188 организациями из 36 стран мира.

В кооперации выполняются 58 научных проектов, в том числе 24 с финансовой поддержкой зарубежных фондов.

НАУЧНЫЙ ПОТЕНЦИАЛ

КАДРЫ:

штатная численность 1491 человек

научных сотрудников - 642, из них

102 доктора наук и 319 кандидатов наук

(в их числе 4 академика и 2 член- корреспондента РАН, более 40 действительных членов негосударственных академий и международных академий)

Общая стоимость основных фондов - более 2,7 млрд. руб.

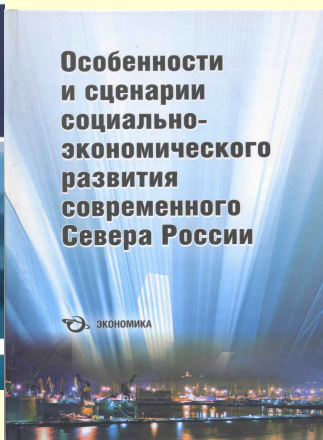
Оперативное финансирование за 2008-2012 г.г. -

по бюджету 6,1 млрд. руб.

по контрактам 0,6 млрд.

Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

ОБЕСПЕЧЕНИЕ НАУЧНОГО СОПРОВОЖДЕНИЯ ПРОГРАММ РАЗВИТИЯ РЕГИОНА



КНЦ взаимодействует с СОПС и Экспертным советом по Арктике Федерального Собрания РФ в выработке планов действий по реализации стратегических задач России в АЗРФ.

ВКЛАД КНЦ В ОБРАЗОВАНИЕ И ПОДГОТОВКУ КАДРОВ

КФ ПетрГУ

ИНЖЭКОН

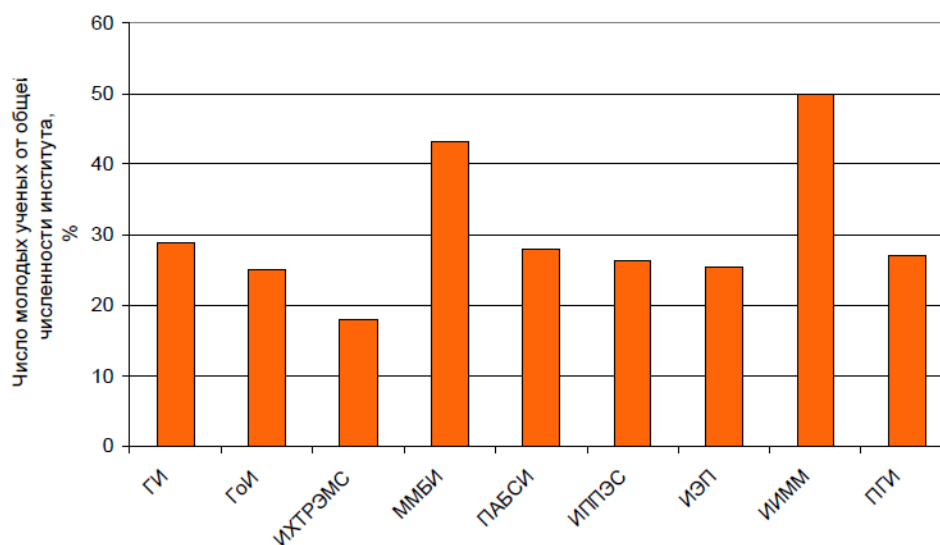
АФ МГТУ

Постдипломное образование:
150 аспирантов и соискателей
4 диссертационных совета
Защищено в 2008-2012 гг
14 докторских и 90 кандидатских диссертаций

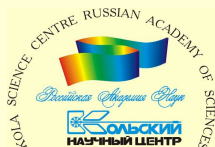
400 преподавателей
21 базовая кафедра



Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ



Процентное соотношение численности молодых ученых в институтах КНЦ РАН от общего количества научных сотрудников



КНЦ – один из главных центров подготовки высококвалифицированных специалистов научной и производственной сферы для Баренц-региона

- 21 базовая кафедра
- ~ 3500 студентов, более 30 специальностей
- ежегодный выпуск – около 600 чел.
- площадь учебных и вспомогательных помещений – более 50 000 кв.м.
- 26 специальностей аспирантуры
- численность аспирантов – более 165 чел.
- ежегодный выпуск – 30-40 чел., востребованных в КНЦ и реальном секторе экономики



Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

Образовательная деятельность и работа базовых кафедр в Кольском научном центре РАН

Базовые кафедры КФ ПетрГУ в институтах Кольского научного центра РАН	
ГОИ	кафедра горного дела и обогащения КФПГУ, проф. Мельников Н.Н.
ПГИ	НУЦ «Физика атмосферы ближнего космоса и космических лучей» НУК экспериментальной физики Объединенный НУЦ по радиогеофизике,
ИППЭС	кафедра биологии КФПГУ кафедра экологии КФПГУ
ИЭП	Научно-образовательный центр ИЭП
ИИММ	кафедра информационных систем КФПГУ кафедра информационных технологий КФПГУ кафедра прикладной математики КФПГУ
ЦФТПЭС	Высоковольтные электроэнергетика и электротехника – профессор Ефимов Б.В.

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Мурманский государственный технический университет

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Ростовский государственный университет

Океанологии (баз. каф. ММБИ) – чл.-корр. РАН Д.Г. Матишов;

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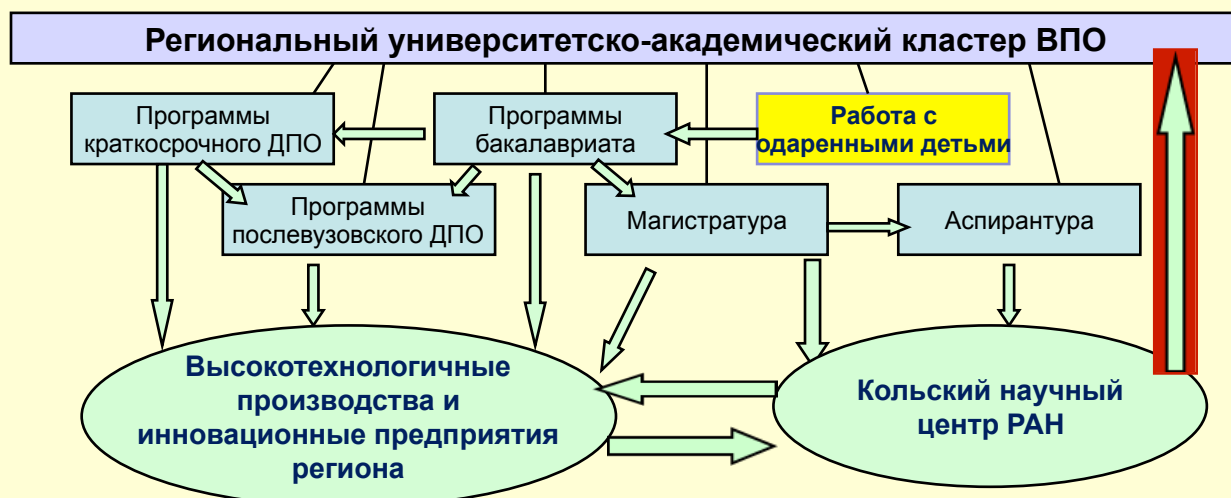
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УНЦ «Экоцентр МГУ» – проф. чл.-корр. РАН В.К. Жиров, проф. А.В.Смуров;

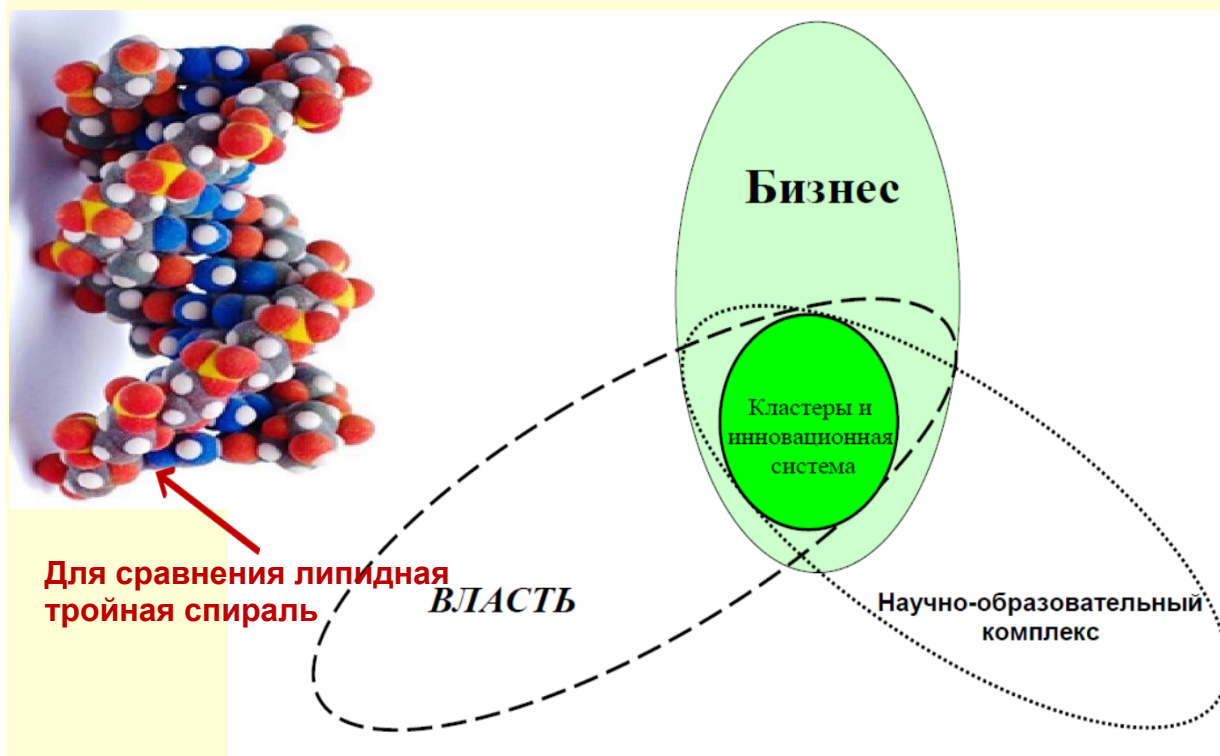
УНЦ ПАБСИ-МГТУ – д.г.-м.н., проф. Н.Е. Козлов.

Перспективная задача интеграции КНЦ РАН с ВУЗами региона – сконцентрировать образовательный потенциал КНЦ и обеспечить системное решение задачи подготовки кадров высшей квалификации технического и естественно-научного профиля для региональной науки и наукоемких сфер хозяйственной деятельности.

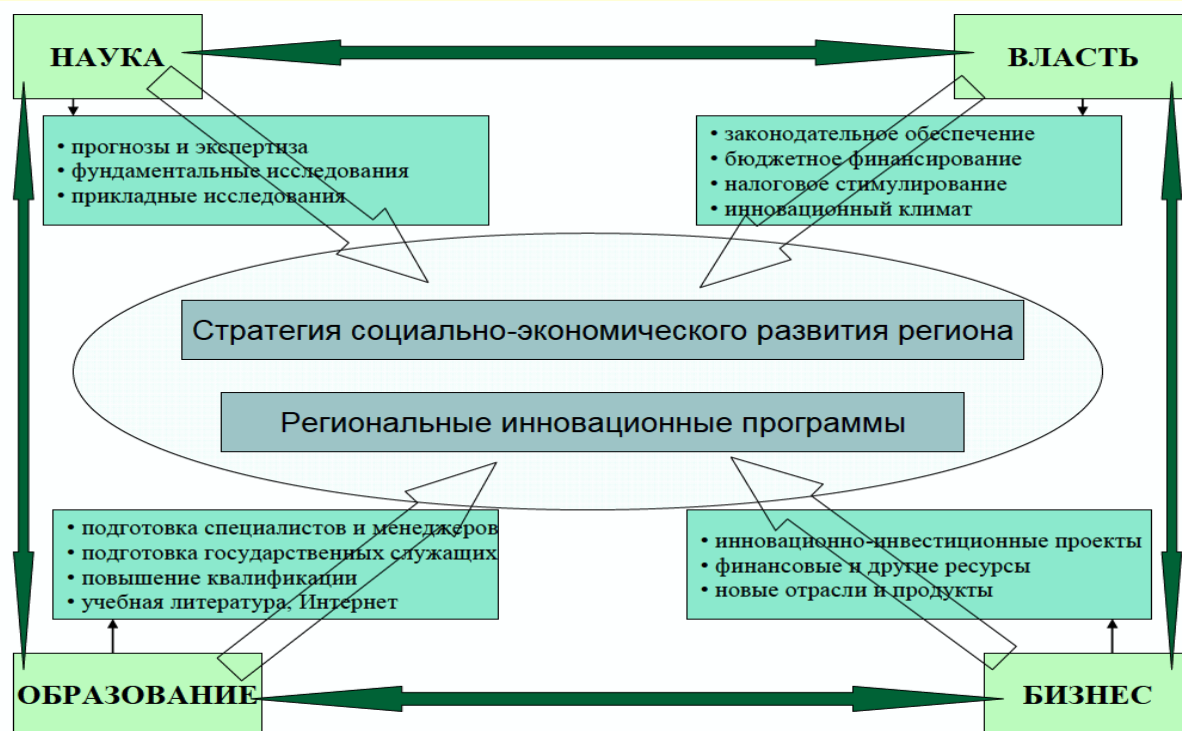


Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

«Тройная спираль» взаимодействия



Инновационное партнерство науки, образования, власти и бизнеса



Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

Непрерывность экологического образования для устойчивого развития

Детский сад

Зеленая планета

→ Школа

Шаг в будущее

Шаг в науку

→ ВУЗ

Научные конференции

→ Аспирантура

→ Работа

НИР

Гранты



Reviewer: Dregalo Alexandr Alekseevich,
Doctor of Sociology, Professor

UDC 323/324, 342.1, 342.5.

Russian Arctic regional development aspects: the Republic of Sakha (Yakutia)



© **Sleptsov, Anatoly N.** The head of UNESCO chair of North-Eastern Federal University named after M.K. Ammosov, Candidate of Law.

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Abstract: The article focuses on the regional development aspects of the Russian Arctic in case of the Republic of Sakha (Yakutia). The author explains the reason for the 13 Arctic and Northern territories of Yakutia to be legally considered as a part of the Russian Arctic. The Republic of Sakha (Yakutia) has accumulated a long term positive legal experience in

regulating the development of the Arctic and Northern ulus (districts) of Yakutia, which is of interest for the law community in other territories of the Russian Arctic. The author analyzes the issues of socio-economic development of the Yakut part of the Arctic and the results of the Year of the Arctic 2014. In conclusion some specific recommendations on development of the Arctic territories are to be found.

Keywords: *Arctic zone of the Russian Federation, the Republic of Sakha (Yakutia), the socio-economic development, Yakut Arctic Republican legislation, Year of the Arctic*

Introduction

Russian Arctic policy is determined by tow legal acts: “Fundamentals of State Policy of the Russian Federation in the Arctic for the period until 2020 and beyond” and “Strategy for development of the Arctic zone of the Russian Federation (RFAZ) and the national security for the period up to 2020”¹. The Strategy contains priority issues of the RFAZ and its development: social and economic development, ecological security, development of science and technologies and establishment of the information and telecommunication infrastructure.

It is necessary to improve the system of state management for social and economic development of the Russian Arctic to ensure effective implementation of the state policy in the Arctic. To do this, one should solve the problems of legal status of the Arctic territories, develop mechanisms and tools for their regulation and sustainable development and take into account the international experience of the Arctic countries. Over the years, the public authorities of the Arctic regions have raised questions about the need to strengthen the state's role in regulating the

¹ URL: www.consultant.ru (Accessed: 25.07.14).

economy of the Arctic territories ²; use of fiscal measures, establishment of the new industrial, innovation, environmental and social policies, improvement of the state support system for the Far North due to extreme climatic conditions and low quality of life of the population ³.

Current legislation is not fully designed for territories with the extreme climatic conditions, remote areas and their economy and social sphere. The legal framework of the state support of social and economic development in the Arctic requires a radical transformation aimed at creating conditions for ensuring the quality of life for northerners. So far the current legislation lacks the federal law "On the Arctic zone of the Russian Federation" and there is a problem of the legal definition of maritime and land territory of the Russian Arctic, which should be fundamental for the state Arctic policy.

In accordance with the presidential decree "On the part of the land territory of the Arctic zone of the Russian Federation" 2nd of May 2014, № 296, the term "Arctic territories" is referred to five coastal areas of the Sakha Republic (Yakutia), with direct access to the Arctic Ocean. However, the Republic of Sakha (Yakutia) considers 13 ulus (districts): Abyisky, Allaikovsky, Anabarsky, Bulunsky, Verkhnekolymsky, Verkhoyansky, Zhigansky, Momsky, Nizhnekolymsky, Oleneksky, Srednekolymsky, Ust-Jansky and Eveno-Bytanayskiy a part of the Arctic. 11 of these districts had a legal status of a part of the Russian Arctic in the draft of the federal law "On the Arctic zone of the Russian Federation" (2013, January).

Why 13 northern districts of Yakutia should be included in the Arctic zone of the Russian Federation

The distinctive feature of the Arctic territory of Yakutia is its location - north of the Arctic Circle (66°33' north latitude). This fact together with the integrity of the natural and agricultural territorial complexes and connection of the transport system with the Northern Sea Route, in our opinion, correspond to the priority areas of the Strategy and the position of a number of prominent scientists and researchers on the composition of the Russian Arctic [1, 2, 3]. Yakutia is the largest area (3.1 mln km²) of Russia, over 40% of its territory is located north of the Arctic Circle. Its water areas of the Laptev Sea and East Siberian Sea are 30% of the Arctic seas.

13 municipal districts of Yakutia have identical climatic conditions — Arctic and Subarctic climate and are absolutely and extremely uncomfortable areas for living. The Yakut Arctic has the mainland cold pole. In 19th century in Verkhoyansk the temperature -67.8°C was registered there

² URL: www.council.gov.ru/media/files/41d44f2437f8ef633efa.pdf (Accessed: 25.02.13).

³ URL: http://narfu.ru/aan/article_index_years.php?ELEMENT_ID=209732 (Accessed: 05.03.2015).

and the depth of the permafrost was 1.5 km. The average duration of the heating period in all 13 districts is more than 9 months [4].

Table 1

Meteorological data on 13 districts of the Sakha Republic (Yakutia)

No	Districts	The average annual air temperature, °C	Minimum air temperature, °C	The average monthly air temperature in January, °C	The average duration of the heating period, days
1	Abyisky	-16,8	-55,0	-41,5	276
2	Allaikhovsky	-14,7	-54,4	-34,2	319
3	Anabarsky	-14,6	-60,0	-34,8	310
4	Bulunsky	-14,0	-61,0	-34,9	328
5	Verkhnekolymsky	-11,2	-58,8	-36,7	269
6	Verkhoyansky	-14,4	-67,6	-44,5	273
7	Zhigansky	-11,8	-62,2	-39,1	277
8	Momsky	-14,2	-62,1	-44,2	272
9	Nizhnekolymsky	-12,8	-55,0	-34,1	297
10	Oleneksky	-12,7	-64,2	-39,6	287
11	Srednekolymsky	-12,3	-58,0	-37,0	281
12	Ust-Jansky	-14,4	-59,8	-38,3	301
13	Eveno-Bytanayskiy	-14,4	-56,1	-38,8	293

In addition, all 13 districts (ulus) have other specific Arctic features: *first*, the spot location of industry and low population density; *secondly*, remoteness from the major industrial centers, transport and energy networks, high resource consumption and dependence of economy and livelihood on the supply of fuel, food and essential goods and its delivery from the central regions of Russia.

Socio-economic problems of the Arctic in the most concentrated form are manifested in the housing sector, which is characterized by a high proportion of emergency and dilapidated housing; a high cost of fuel, food and essential commodities; difficulties in sales for traditional industries of the North; and a lack of modern processing industry. The population density is 15 times lower than outside the Arctic zone (0,04 people per 1 km²) [5].

13 Arctic districts of Yakutia consist of 86 urban and rural settlements. On the 1st of January 2014, the population of the Arctic districts was 69,395 people or 7.3% of the total population of the Republic; the proportion of rural population was 60.8%. Since 1990, the population of Arctic has declined by more than 2 times, and migration loss increased by 1.5 times⁴. Such negative demographic processes could be observed in all areas of the Arctic; the largest decline in population is observed in Ust-Jansky and Nizhnekolymskiy and caused by the closing of factories and plants there.

⁴ URL: <http://www.sakha.gov.ru/node/186817> (Accessed: 27.02.2015)

Table 2

Territory and density of the population of the 13 districts of the Republic of Sakha (Yakutia)

№	Districts	Territory, thousands km ²	Population (01.01.2014) people	Density persons/km ²	Major town
	Total	1608,8	69,395	0,04	
1	Abyisky	69,4	4,196	0,06	Belaja Gora
2	Allaikhovsky	107,3	2,764	0,03	Cho kurdah
3	Anabarsky	55,6	3,403	0,06	Saskilah
4	Bulunsky	223,6	8,507	0,04	Tiksi
5	Verkhnekolymsky	67,8	4,317	0,07	Zitjanka
6	Verkhoyansky	137,4	11,665	0,09	Bagatai
7	Zhigansky	140,2	4,245	0,03	Zhigansk
8	Momsky	104,6	4,237	0,04	Honuu
9	Nizhnekolymsky	87,1	4,414	0,05	Chepsky
10	Oleneksky	318,0	3,963	0,01	Olenek
11	Srednekolymsky	125,2	7,535	0,06	Srednekolimsk
12	Ust-Jansky	120,3	7,359	0,06	Depytatsky
13	Eveno-Bytanayskiy	52,3	2,790	0,05	Baagai-Alita

13 districts were included in RFAZ because of the unity of their natural and economic systems, transport nets and infrastructure that creates: 1) Leno-Anabarsky, 2) Yano-Indigirsky, 3) Kolimsky clusters ⁵. Districts are united into clusters depending on delivery of goods along the northern rivers: the Lena, the Anabar, the Yana, the Indigirka and the Kolyma Rivers, flowing into the Laptev Sea and East Siberian Sea (Arctic Ocean). Lena-Anabar cluster includes the territories of Anabarsky, Bulunsky, Oleneksky and Zhigansky districts, united by the transport network of the Anabar and the Lena Rivers. OJSC “ALROSA” and OJSC “Almazi Anabara” are conducting mining and exploration on the territory of all Arctic districts of the Republic. On the Lena-Anabarsky cluster territory some deposits of diamonds have been found. In Oleneksky district the “Rosteh” company together with private investors has begun developing the “Tomtor” field of 250 km², one of the largest in the world. The reserves of rare metals are estimated at 154 million tons of ore. Planned investments are equal 30 billion rubles for 6 years ⁶. On the territory of the district there is also the Zhigansky oil and gas area.

Yano-Indigirka cluster includes Allaihovskiy, Abyiskiy, Verkhoyansk, Momskiy, Ust-Jansky and Eveno-Bytanayskiy districts. Geological exploration, historically formed complex for the extraction of ore and minerals (especially tin and gold), as well as the long-term plans for the development of

⁵ The letter from the Government of RS (Ya) to Ministry of Regional Development on the 28th of August 2013, №748-ПЗ. The complex program for 2014-2017 and up to 2020 has 5 clusters mentioned: 1) Anabarsky cluster (Anabarsky and Oleneksky districts); 2) Prilensky cluster (Bulunsky and Zhigansky districts); 3) Yansky cluster (Ust-Jansky, Verkhoyansky and Eveno-Bytanayskiy districts); 4) Indigirsky cluster (Allaikhovsky, Abyiskiy and Momskiy districts); 5) Kolimsky cluster (Nizhnekolymsky, Srednekolymsky and Verkhnekolymsky).— Editor’s note

⁶ URL: <http://rostec.ru/news/3302> (Accessed: 19.03.2015).

new deposits and the creation of transport infrastructure make it possible to assess the areas of the Yana-Indigirka cluster. The “Kyuchus” deposit consists of: gold — 175.3 tons and silver — 26.5 tons. The reserves of gold on the deposit amount to more than 140 tons. Deposits “Sentachan” and “Sarilah” in the Oimyakonsky district are the only antimony deposits in Russia, where production is carried out. The Eveno-Bytanayskiy area specializes in Arctic reindeer herding, so necessary for the indigenous population. Abyisky region has deposits of gold, coal, niobium, tantalum and semiprecious materials (agate and carnelian) and building materials (basalt). The Momsky district has deposits of gold, plumbum, zinc, tin, gemstones, coal, jade, construction materials and the oil and gas basin of the Momsky-Zyryansky.

Kolyma cluster includes the territory Nizhnekolymsky, Srednekolymsky and Verkhnekolymsky districts. Union of these territories and their single cluster is possible due to an integrated river transport network on the Kolyma River from the perspectives of the coal export from the “Zyrjanka” deposit through the ports of the Northern Sea Route to the world markets.

No doubts, the fishery complex of the Arctic zone of Yakutia in the one, as long as the valuable species of aquatic fish are spawning in the estuaries of the Arctic regions in the seas of the Arctic Ocean.

The share of Yakutia accounts for over 30% of the Russian wildlife and more than 10% of the world's one [6]. In the polar regions of Yakutia, 66 Specially Protected Areas (SPA) are disposed. The total of SPAs is 555,100 km². In the Arctic districts of the Republic SPAs occupy 12.3% ⁷. The SPAs are the guarantee of preservation of the Arctic nature, its ecosystems and biological resources.

Four districts of the Republic of Sakha (Yakutia) have the status of “national” for the purpose of protecting and preserving the indigenous culture and language. When one of such districts — Anabarsky (Dolgano-Evenksky) is included in the RFAZ and its surrounding areas: the National Zhigansk Evenki district, Oleneksky Evenki national area, Eveno-Bytanayskiy-national area are not included in the RFAZ. In these areas, it is planned to create a single tourist-recreational cluster in order to maintain traditional activities of indigenous peoples of the North; to contribute to the comprehensive development of coastal fisheries and expanding the network of innovative enterprises for processing of aquatic biological resources and reindeer products. Moreover, some measures have been already implemented and they fully meet the main requirements of sustainable development of the Arctic districts in respect of the preservation and development of the traditional lifestyles of the North.

⁷ URL: <http://www.sakhaopenworld.org/ilin/2000-3/16.htm> (Accessed: 25.02.2015).

All of the above justifies the need for the inclusion of Abyisky, Allaikhovsky, Anabarsky, Bulunsky, Verkhnekolymsky, Verkhoyansky, Zhigansky, Momsky, Nizhnekolymsky, Oleneksky, Srednekolymsky, Ust-Yansky and Eveno-Bytanaysky districts of the Republic of Sakha (Yakutia) in the Arctic zone of the Russian Federation.

Legal regulation of the Arctic and northern districts of Yakutia

In the Republic of Sakha (Yakutia) has accumulated positive experience in regulating legal, economic and cultural development of the Arctic and Northern ulus (districts) of Yakutia, which could be of interest to the authorities of other regions of the Russian Arctic. The starting point of the legislative process was the adoption of the Resolution of the Government of the Republic of Sakha (Yakutia) on the 2nd of December 1995, № 521 “On Special Measures of State Support of traditional industries, livelihoods and social protection of the rural population of the Arctic regions”. According to this legal act, 13 districts of the Republic: Abyisky, Allaikhovskiy, Anabarsky, Bulunsky, Verkhnekolymskiy, Verkhoyansky, Zhigansky, Momsky, Nizhnekolymsky, Srednekolymsky, Oleneksky, Ust-Jansky and Eveno-Bytanayskiy districts, located north of the Arctic Circle (66°33'NL) are considered as the Arctic territories and proclaimed a special economic zone and the area of state protectionism. So, it was the way the Arctic districts of Yakutia became an independent object of state administration in mid 1990s.

Over the past 20 years, due to the absence of any other legal acts, Russian Federal authorities has been determining the composition of the Arctic areas of the Republic of Sakha (Yakutia) in accordance with the legal act mentioned above. This document is fundamental for dozens of regulatory legal acts of Yakutia on social and economic development of the Arctic districts. It is sufficient time to recognize the current practice a precedent and use it for the development of legal acts on sustainable development of the Yakutia and its Arctic territories.

Analysis of the republican legislation in the sphere of socio-economic development of the Arctic and northern areas shows that *the first place* is occupied by the questions of “northern delivery” — a special mode of cargoes delivery to the Arctic territories, centralized supply of essential goods; *the second place* is for the financial issues, subsidies for transport and aviation in the Arctic and maintenance of housing and communal services; *the third place* — the state support and retention of young professionals, teachers and health workers in the Arctic.

Special attention is devoted to the legislative support of preservation and development of reindeer herding, indigenous culture, language and education. In the long term perspective, it is expected to move towards more effective model of development — namely, balanced solutions of

the problems of industry and traditional management of the North with the necessary preservation of natural ecosystems and biodiversity.

At present, there are developed and adopted programs of socio-economic development of municipalities, basic for the sustainable development of these territory. Existing state programs for economic and social development of the Republic of Sakha (Yakutia) contain some special activities and routines for the development of the Arctic ulus and places of compact residence of national minorities of the North.

In 2014, the Year of the Arctic, 34 Republican legal acts on social and economic development, including 4 decrees and 7 orders of the Head of the Republic; 8 resolutions and 15 orders of the Government of the Republic of Sakha (Yakutia).

The Decree of the Head of the Republic Egor Borisov, signed on the 18th of August 2014, № 2824, establishes the State Committee of the Republic of Sakha (Yakutia) for the Arctic ⁸. Resolution of the Government of the Republic Sakha (Yakutia), signed on the 24th of November 2014, № 420 approved the Regulations on the State Committee of the Republic of Sakha (Yakutia) for the Arctic and its Board. The State Committee is an executive body of the Republic, conducting inter-sectoral coordination of the development of the Arctic and northern areas; improving the system of public administration; implementing measures of state support of traditional industries of the North and regulation of traditional fishery, as well as regulation of issues within its jurisdiction. The aims, power and rights of the State Committee are set, as well as its responsibilities. One of the aims of the State Committee is the interaction with federal and republican bodies to amend legislation of the Russian Federation and the Republic of Sakha (Yakutia) in order to provide the sustainable development of the Arctic and northern areas of the Republic of Sakha (Yakutia) ⁹. The State Committee is able to participate in clarifying the geographical boundaries of the RFAZ, its southern boundary as well and in clarifying the list and the legal status of municipalities not included in RFAZ.

Social and economic development of the Yakut Arctic

Socio-economic development, as noted above, is determined by the presence of natural resources. On the territory of the Arctic zone of the Republic of Sakha (Yakutia) (hereinafter Yakut Arctic) there are more than 100 kinds of minerals, metals, diamonds, oil, gas, tungsten, copper, antimony, gold, silver and other natural resources, including deposits of diamonds near the rivers: Anabar, Olenyok, Molodo and Motorchuna; the “Tomtor” deposit of rare metals; the tin deposit

⁸ URL: <http://sakha.today/policy/arctic/> (Accessed: 19.03.2015).

⁹ URL: <http://info-ecology.ru/zakon/?id=423842516> (Accessed: 19.03.2015).

“Deputatskoye”; the gold deposit “Kyuchus” and etc ¹⁰. The future of the Yakut Arctic is largely dependent on the further development of existing deposits.

It should be noted that the development of mineral resources of the Yakut Arctic is going on based on the “Scheme of the complex development of productive forces, transport and energy of the Republic of Sakha (Yakutia) until 2020”, approved by the Government of the Republic on the 6th of September 2006, № 411 ¹¹. This paper represents an alternative approach to determining the scenarios of the Republic of Sakha (Yakutia) in the future up to 2020.

Currently, socio-economic development of the Yakut Arctic is also dependent on the development of energy and transport infrastructure, including the network of seasonal roads (ice roads): “Anabar” (1167 km of the road “Vilyui” — Mirnyi — Udachny — Olenek — Saskilar — Urung-Khaja); “Jana” (533 km of the road “Kolima” — Topolinoe — Tokuma — Batagai — Ust-Kuiga-Deputatsky — Belaja Gora); “Arktika” (Burustaah, 1103-th km of the road Kolima — Sasir — Ugolnoe — Zirjanka — Srednekolimsk — Andrushkino — Chersky); “Indigir” Ust-Nera — Honu — Belaja Gora — Chokurdakh; “Ojmjakon” (Kyubyumya, 752 km of the road “Kolyma” — Kuydusun — border of the Magadan region); “Verkhoyanye” (Batagay-Alyta-Verhoyansk-Batagai) and “Edigeen” (Balagachcha — Kirovo — Bahanay — Zhigansk) and on the revival of the Northern Sea Route, which is used for the northern delivery to all 13 districts (ulus) of the Yakut Arctic ¹².

North delivery is a set of the annual measures to ensure the Arctic territories of vital goods (especially food and oil) before the winter season. Northern delivery as a phenomenon is existing due to the following reasons: 1) extreme climatic conditions of the Arctic and North; 2) The lack of their own production base of many industrial and agricultural goods; 3) Distance of the main industrial regions of the country, which are thousands of kilometers away, makes it difficult and very expensive for individuals and legal entities to deliver goods and by themselves, even in the summer months; 4) complete lack of transport infrastructure, except for air or maritime traffic in most parts of the Arctic and North. A short navigation period along the Northern Sea Route (about 2 months), rivers (from 20 days to 4 months) and the actual off-road in the Yakut Arctic make the timing of delivery account for more than 1 year sometimes¹³.

Northern Delivery System as a centralized supply of energy resources and food products is in crisis after the collapse of the USSR and disappearance of its ministries and departments

¹⁰ URL: <http://www.sakha.gov.ru/node/174966> (Accessed: 20.03.2015).

¹¹ URL: http://www.sakha.gov.ru/special/sites/default/files/story/files/2010_10/114/shema_2020.pdf (Accessed: 19.03.2015).

¹² Письмо Правительства РС(Я) в адрес Минрегиона РФ от 28 августа 2013 года №748-ПЗ.

¹³ URL: http://www.sakha.gov.ru/special/sites/default/files/story/files/2010_10/114/shema2020.pdf (Accessed: 19.03.2015).

responsible for the northern delivery [7, p.13]. Yakutia has no alternative to the current scheme of northern delivery. Railway or road transportation is not able to ensure the delivery of all the necessary goods to the Arctic regions; there is no necessary infrastructure and the cost of transport in such conditions is significantly higher than the river transportation. Moreover, polar aviation cannot be an alternative there. Therefore, the main carrier is the river fleet, which is going out to the Lena River and to the Laptev Sea and delivers goods through the northern rivers. Of course, in such a situation it is necessary to take urgent measures for the modernization of the freight river fleet, which is requiring qualitative renewal and quantitative build-up, as well as the increase in the number of dredgers of the “river-sea” class at the mouth of the northern rivers. In the future, we are considering options for the use of revived Northern Sea Route. Special attention is required in order to improve the economic, management and financial mechanisms of the northern delivery. Justification of the ways of northern delivery mechanism is based on the principles of optimization of the economic barriers for the businesses to entry northern markets; - it was done in 2006, in the thesis written by Y. K. Zafesov [8]. The thesis is about financial resources; widening the list of socially important food products, which are subject to measures of state support; the rational use of the transport system; tax breaks and other issues.

The main measures aimed at improving the quality of life of northerners include the modernization of social infrastructure: education, health, culture, development of telemedicine and small aircraft system, distance learning technologies and the Internet. Decree of the President of the Republic of Sakha (Yakutia) E.A. Borisov, signed on the 25th of December 2013, №2415, proclaimed the year 2014 the Year of the Arctic Yakutia and the program “Socio-economic development of the Arctic and northern regions of the Republic for 2014-2017 and the period up to 2020” (hereinafter the Program) was adopted ¹⁴. The Program implemented an integrated approach aimed at transition from the policy of optimizing to the strategy for integrated socio-economic development. The main targets are linked to improving the quality of life of the population of the Arctic regions. The Program was designed in accordance with the “pool approach” to the specialization and development of the territory. The unifying feature and competitive advantage of all the regions of the Arctic zone is their access to the Arctic Ocean and to the system of rivers flowing into it: the Anabar, the Lena, the Yana, the Indigirka and the Kolyma Rivers. Districts are located in the basins of these rivers and form common natural and economic

¹⁴ URL: <http://yakutsk.bezformata.ru/listnews/ekonomicheskoe-razvitie-arkticheskikh/22643336/> (Accessed: 19.03.2015).

system. Their unity is also maintained by the “northern delivery” of goods, logistics and export turnover of products.

The Program was started in 2014. Investment in 2014 for all 13 Arctic districts amounted to 2.34 billion rubles. Turnover, retail trade and volume of paid services increased significantly. Good results were achieved in housing sector. In 2014 it was built more than 18,900 m² of housing, which is 16.7% more than in 2013. The number of small and medium-sized businesses has increased by 5.8% in Yakut Arctic. In Abyisky, Zhigansky, Srednekolymsky and Eveno-Bytantaisky districts the growth exceeded 10% ¹⁵.

In order to develop transport infrastructure in 2014, the local government increased subsidizing the passenger traffic on socially significant routes, municipalities allocated the resources from the state budget for the purchase of off-road vehicles. Developing the energy and utility infrastructure, about 450 houses were joined a centralized source of heating and 46 apartment buildings were repaired. A solar power plant was constructed in the village of Eyik of the Olenek district and in Kubergene village of the Abyysky District; a wind power station is constructed in the village of Bykov Mis of the Bulunsky District. In addition, automated diesel power plants are built in the village Khaiyr of the Tumat Ust-Yana district and in the village of Bakhani of the Zhigansky district; new boiler stations appeared in Zhigansk and Yunkyr villages of the Verkhoyansk district. 116 municipal contracts to purchase the special equipment for the communal areas of the Arctic were signed ¹⁶.

Among the positive changes that have occurred in the Year of the Arctic, the first vice-premier of the government of the Republic of Sakha (Yakutia) Alekseev Peter rightly named: the increased funding for the development of the Yakut Arctic; the construction of social facilities (kindergartens, schools, medical stations, sports facilities); renewal and modernization of the housing; the development of energy, utilities and transport infrastructure; health, culture and scientific development; creating new industries; marketing of agricultural products of the Arctic districts; the growth of financial support of traditional sectors of the northern economy: reindeer herding and fishing; growth of the small business in the Arctic districts ¹⁷. Many of activities mentioned above got significant support and appropriate funding. According to P. Alekseev, in 2015 the amount of funding for the traditional industries of the North increased by 43.4% or 246 mln rubles. In 2015 the construction of facilities for slaughter, reindeer bases, fences, plants for fish processing are expected to be built. These activities had no funding for decades.

¹⁵ URL: <http://www.sakha.gov.ru/node/228425> (Accessed: 20.03.2015).

¹⁶ URL: <http://news.ykt.ru/article/27690> (Accessed: 20.03.2015).

¹⁷ Ibid.

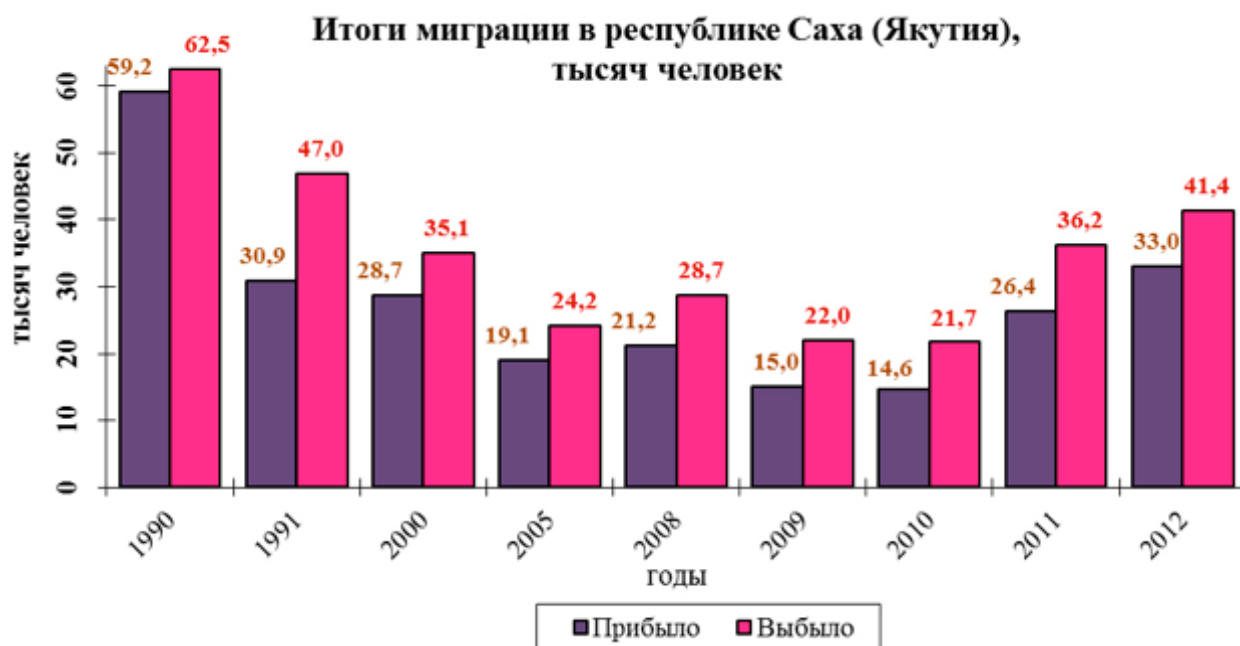
In August 2014 the Republican authorities established a state-owned enterprise “Roads of the Arctic” to address the issues of construction, repair and maintenance of roads in the Arctic. The company operates the roads with the length of 3,700 km. Boats of small capacity are bought to organize the passenger transportation in the northern districts. As part the federal program of the northern airports development, it is conducted a design and reconstruction of eight airports in the Yakut Arctic.

Thus, in 2014 in the Republic of Sakha (Yakutia) laid the foundation for the sustainable development of its Arctic districts. It is planned to modernize the fleet of the Lena, Yana, and Kolyma shipping companies, sea port of Tiksi and the restoration of coastal service infrastructure. The construction of a series of self-contained power plants for local consumers (including floating nuclear power plants for companies developing the deposits “Tomtor” and “Kyuchus”) is also in plans for the nearest future.

The solution to these and other problems is largely determined by the quality of training and professional competence of people working in the Arctic. Required specializations are: oil and gas geology, technology of hydrocarbons’ processing, forestry and wood processing industry, road construction, operation of road, rail and river transport, ecological and ethnographic tourism.

An urgent task remains to attract highly qualified personnel in the Arctic districts and to ensure their individual housing. In the Republic there is a program aimed at providing housing for teaching staff going to remote rural schools in inaccessible Arctic ulus. Effects of the program “Providing housing for teaching staff in rural schools and medical personnel of the health care institutions of the Arctic and northern ulus” and the Yakut governmental program “Providing high quality housing 2012-2016” are that its members continue teaching at their schools and provide quality of education according to the full scope of national standards and contribute to the development of the Arctic. Another important factor is the fact that many participants got families and they are actively involved in public life and are youth leaders.

The disappointing results of the migration remain in the Republic of Sakha (Yakutia). Number retired in the 21st century exceeds the number of arrivals, which is visually represented in a diagram of the Center for Strategic Studies of the Republic of Sakha (Yakutia), the head of the CSS — V.I. Kondratyeva.



Picture 1. URL: <http://src-sakha.ru/wp-content/uploads/2013/11/Itogi-migratsii.jpg>

Center for Strategic Studies of the Republic of Sakha (Yakutia) takes part in the study of the quality of life in the Arctic as part of an international project coordinated by Stefansson Arctic Institute (Akureyri, Iceland) under the name “Arctic social indicators” (hereinafter — ASI). The ASI project was initiated by the Stefansson Arctic Institute in 2006 as an extension to the Report “Human Development in the Arctic” and aimed at developing social indicators to ensure the monitoring of human development in the Arctic for a long time¹⁸.

According to the National Agency “Information Center under the President of the Republic of Sakha (Yakutia)”; general manager — A.D. Bravin, criteria for evaluating the attractiveness of the regions for the Russians willing to change residence, were located as follows: “the first place — available housing and high levels of social security; the second — opportunities for education and mental and physical development of children; the third — professional and career development opportunities; followed by the work based on the specialization, sports and cultural activities, friendly attitude to visitors, comfortable climatic conditions, support of the region when moving to a new place of residence”¹⁹. The research led to the conclusion that the general tendency of inter-ethnic conflict in modern Yakutia is quite obvious — the confrontation between migrants and “local” population, regardless of their race or nationality. It confirms the idea that in

¹⁸ URL: <http://src-sakha.ru/wp-content/uploads/2015/01/AD-CHelovek-v-Arktike.pdf> (Accessed: 20.03.2015)

¹⁹ URL: <http://www.1sn.ru/67218.html> (Accessed: 20.03.2015).

modern Russia ethnic conflicts are generated mainly by the intense growth of the non-integrated migrant groups that differ in their everyday culture from the majority of the host population²⁰.

In April 2014 President of the Russian Federation Vladimir Putin supported the initiative of the Head of the Republic of Sakha (Yakutia) E.A. Borisov to hold new large-scale research expeditions in Yakutia in order to study its economic potential. As a result of comprehensive scientific expedition of the RAS “Yakutia — the region of the new development” some recommendations for its further economic development will be prepared as well as scientific suggestions for the implementation of the state policy aimed at further development of the human potential of the Republic of Sakha (Yakutia). The second complex expedition of the RAS to study the productive forces on a new stage of industrial development of the Republic of Sakha (Yakutia) (KYAE-2015) will be held in the period between the year 2015 and 2020.

In 2015 it is 90 years since the beginning of the Yakut Expedition of the Academy of Sciences of the USSR. The results of the expedition gave a powerful impetus to socio-economic development and creation of the commercial, industrial and agricultural infrastructure of Yakutia. High mortality rate was won after the establishment of a network of scientific, medical and social institutions of the SB RAS. Yakut complex expedition of the USSR Academy of Sciences published its materials on natural resources, economics, geography, ethnography, and sanitation in 36 volumes of “Materials”, 16 volumes of “Scientific works”; reports on the progress of expedition groups were published in a collection of papers called “Yakutia” and publications of the Yakut (Sibiryakov) historical and ethnographic expedition; two maps and a variety of other scientific works.

Conclusion

Sustainable development of the Russian Arctic cannot be considered separately from the legal issues related to the northern territories of Russia in general. In this regard, *we believe that the development of the regulatory framework for the Arctic should be parallel with the updating the legislation on social and labor guarantees for residents of the Far North and Arctic zone of the Russian Federation.*

The composition of the Arctic zone of the Russian Federation should include administrative and municipalities, taking into account: the integrity of their natural and economic complexes; communication of their transport system with the Northern Sea Route, Arctic sea waters and the northern rivers; priorities of the country's economy and national security, using the political and geographic criteria generally accepted in the international community — north from the Arctic Circle (66°33'N).

²⁰ Ibid.

Definition of the Yakut Arctic zone is possible due to specific national and economic interests, as well as extreme climatic conditions of the area. So, we suggest to add to the 6th paragraph of the Annex to the Presidential Decree, signed on the 2nd of May 2014, № 296 “On the land territory of the Arctic zone of the Russian Federation” after the words “Territories of the Allaikovsky Ulus (District), the Anabar National (Dolgan-Evenk) Ulus (District), the Bulunsky Ulus (District), the Nizhnekolymsky Ulus (District), the Ust-Yansky Ulus (District)” the phrase: “the Abyysky Ulus (District), the Verkhnekolymsky Ulus (District), the Verkhoyansky Ulus (District), Zhigansky Evenk Ulus (District), Momsky Ulus (District), Oleneksky Evenki National Ulus (District), Srednekolymsky Ulus (District), Eveno-Bytantaysky National Ulus (District)” and to the following text of the document as well.

In addition, intergovernmental and tax policies in relation to the Arctic regions of Russia, in our view, should take into account the specifics of managing extreme arctic conditions. For example, it would be appropriate to give the Arctic territories a part of the customs duties and taxes for the use of natural resources. This would actually increase income of the Arctic territories and give them opportunity to use more funding for their sustainable development. At the same time it would be useful to free small and medium business and indigenous communities from taxation for 10 years. Small and medium business, indigenous communities provide livelihoods and employment, and in many respects, they are town-forming institutions. Also, it is important to determine the measures of state support and subsidies for their activities.

It is impossible to solve the problems of the arctic territories without a legal framework that would ensure economic motivation and incentives, quality of life of northerners, including innovative development of social infrastructure. In this regard, we believe that one of the main challenges in implementing the Strategy for the Development of the Arctic zone, especially labor and pension aspects, is to improve the system of safeguards and compensation provided by the Labor Code of the Russian Federation and the Federal Law “On State Guarantees and compensations for people working and living in the Far North and equivalent areas” issued on the 19th of February 1993, № 4520-1. In new economic conditions it is extremely important to develop a new concept of the Arctic “labor factor”, based on the Soviet version of the Northern “regional factor”; to change the methodology for its charging; to set the size of the Arctic employment rate to wages, benefits, scholarships and compensations and the order of its application; to increase financial compensation for moving to the Arctic area and for trips for privileged categories of citizens and to set higher premiums for work experience in the Arctic zone of the Russian Federation. It is advisable to determine the measure of responsibility of employers for the

provision of the legislation of Northern labor guarantees and compensation, and on the other — to establish mechanisms for compensation of real costs to employers for providing guarantees and compensations.

The Labour Code of the Russian Federation mentions that the work of employees, engaged in work in areas with special climatic conditions, to be paid at a higher rate. For the first time it is mentioned in the second part of the Article 146 and then this thesis is being developed in Articles 148, 302, 315, 316 and 317 of the Labor Code. We propose to exclude regional factors and interest allowances from the calculation of the minimum wage (MW).

There is a need of development and adoption of a legal act of the RF Government “*On measures of state support for reindeer herding*” with paragraphs on legal measures aimed at preservation and development of reindeer herding as a modern indigenous family occupation, educating of children of herders in small schools and providing them with health and social care due to the fact that indigenous population of the Arctic are the most vulnerable groups in market conditions.

The adoption of the legal acts discussed above and other measures mentioned in the article would contribute to effective implementation of the “Strategy of development of the Arctic zone of the Russian Federation and the national security for the period until 2020” and improving the quality of life of northerners.

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UDC 338.12.017

Economic and ecological balance and the development of the forest product industry in Arctic countries



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Abstract. Instability of production and the decline of the export share in the world commodity turnover show increasing problems in the forest industry of Nordic countries. The article represents the retrospective analysis of the Northern forest industry development in Norway, Finland, Sweden, Canada and Denmark. The obtained results give us an

opportunity to identify the main economic and environmental problems of the Northern forest industry and its development prospects.

Keywords: *Northern forest industry, the export share, timber production volumes*

Introduction

The world community has become more and more concerned with preservation of ecological stability in terms of economic development and increase in the use of renewable and non-renewable natural resources. The interest in the use of resources, communications and space of the Arctic region has increased significantly. In the Arctic, particularly active countries are Russia and other industrialized countries, such as Norway, the United States (Alaska), Canada, Denmark, Sweden and Finland. Resource challenges in the Arctic require not just awareness of the threats and risks to the environment, but also the balance between strict adherence between economy and ecology and use of innovative, safest technology in the near future [1, p. 47-50].

The first condition for the timber industry (TI) of the northern territories, in my opinion, should be the use of innovative biotechnology of development and resource processing and, at the same time, active measures to protect the Arctic and Subarctic areas from technological and urban impacts in order to maintain environmental stability. The importance of prudent and optimal economic and environmental approach to the development of the Arctic and northern territories is determined by significant fluctuations in the Arctic climate due to global warming [2, p. 179-217]. Ecological relationship and communication between the Arctic and the world human activities prejudice the importance of environmental conservation mechanism for northern forests. They become a protective zone for the Arctic and the North, because forests play a crucial role in

carbon sequestration ¹. Forest zone of the Arctic is widening and changing due to the climate changes and global warming. According to scientists the forest area in the Arctic might become twice bigger by the year 2050 than it is now ². But on the other hand, territories close to the Arctic are experiencing the other processes: growing economic and environmental problems of forest use, because despite the protective role played by forests, Nordic countries have industrial services and provide their own and global need for wood materials of excellent quality compared to other materials. Wood is environmentally friendly and after long-term use is suitable for recycling, which makes it indispensable in terms of resource depletion and climate change. Forest industry in Norway, Sweden, Finland and Canada until 2000 showed stable results and taken on the world market leading position, determining trade policy for import-dependent countries. Past decade, the traditional forest industry leaders were experiencing the backlog in the production and export of forest materials.

The relevance of the issues discussed above identified the objective of the study, which is to analyze the present state of the forest industry in the Nordic countries and to identify the main problems of balancing economic and environmental conditions and development of the forestry industry based on analysis of historical data and statistical indicators in recent years.

Objects and research methods

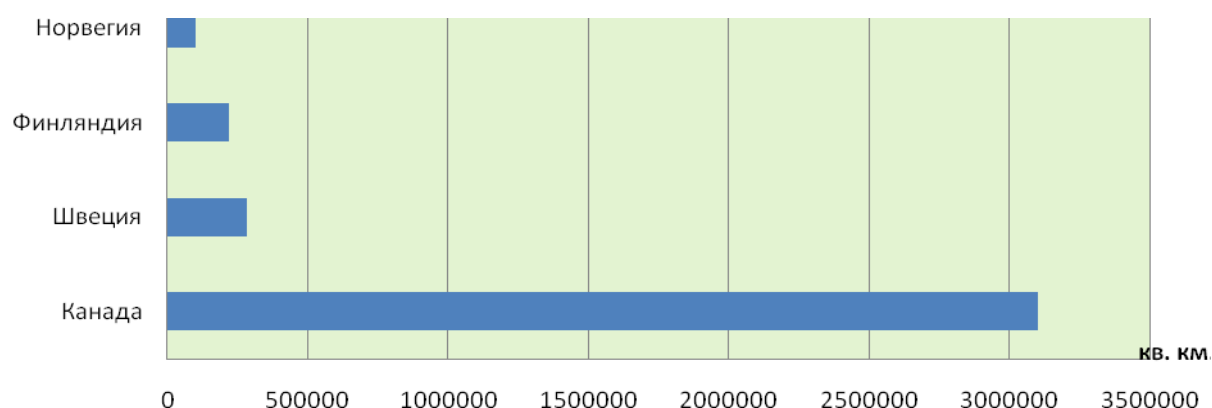
The object of study is the forest industry in the Nordic countries. North forests cover the territories of Norway, Finland, Sweden and Canada, with a predominance of coniferous wood that is harvested and delivered in the form of round wood and is processed into logs, pulp, wood-based panels, paper and other timber materials. The volume of forest areas of the leading manufacturers of forest products (excluding Denmark) reaches 3.7 mln m², representing 11.7% of the world forest area (Pic. 1). And, despite the widespread decline in forest areas, as noted above, these forests could be a source of economic support for the needs of these countries and a significant position in the world markets of forest materials for a long time. In Iceland and Denmark scarce natural forests are associated with geographic location and climatic features. For example, in Iceland most of the territory is covered by tundra shrubs and almost 15% of it is glaciers ³. A variety of tree species in Iceland is limited to three and, for comparison, in Brazil it is 7780. In Denmark it is common to see artificial coniferous forests and some of the deciduous areas suitable

¹ URL: <http://energy.seu.ru/rus/can5.htm> (Accessed: 04.02.2015).

² URL: <http://24smi.org/news/9870-k-2050-godu-arktika-pokroetsya-lesom.html> (Accessed: 21.01.2015).

³ URL: <http://earctic.ru/economics/osvoit-arktiku-obojdetsya-v-500-milliardov-dollarov> (Accessed: 15.01.2015)

for industrial processing. Small forest reserves in these countries are not conducive to the development of the forest industry, and it makes them dependent on the world market of timber⁴.



Picture 1. Forest area. January 2015, thousands of km² // Лес-Онлайн: Лесная промышленность.
URL: <http://www.lesonline.ru> (Accessed: 21.01.2015).

In this article we do not show the timber industry in Russia and the US, which are the subject of a separate examination by virtue of a significant spread of forest and, hence, the magnitude of the industry throughout the territory of these countries [3, p. 126-134]. It is necessary to emphasize the importance of the great northern forests to the competitiveness of the forest industry in Russia and the United States due to an advantageous geographical location, “connected by a perfect network of convenient waterways to the sea and to the global forest market” [4, p. 25-45]. Among other factors supporting the advantage of the northern forest industry we should mention higher chemical and technological characteristics of the northern wood products compared to the fast-growing tropical timber. Northern forests “grow slowly and do not reach large sizes, in contrast to large-scale southern forests”⁵. The longest process of growth provides the forests with the necessary quality of the wood, which, according to technical experts, determines the quality parameters of manufactured products and makes it more expensive on the world market compared to the timber products made from the southern wood⁶.

Methodological aspects of the study are presented with the use of the methods of empirical research (observation, comparison, measurement and modeling). For the processing of statistical data and identification of patterns we applied mathematical and statistical methods that

⁴ URL: <http://www.arcticuniverse.com/ru/denmark.html> (Accessed: 15.01.2015)

⁵ URL: <http://www.lesonline.ru> (Accessed: 21.12.2014).

⁶ URL: <http://www.bumprom.ru> (Accessed: 21.06.2014).

allowed us to draw valid conclusions and present the results in the form of graphs, charts and tables.

Research results

Despite of a large forest resources and a number of other advantages, at present, as noted above, competitiveness is reducing. This is due to the general economic situation, which remained difficult in many countries after the crisis of 2008-2009, and the increase of political and economic instability in 2014—2015. The economic instability causes fluctuations in the demand for timber and paper products and, accordingly, the uncertainty in the commodity markets. Among the reasons for reducing the competitiveness of the Nordic timber merchants we could mention the reduction of natural forest areas, first and foremost, this process affected long growing northern forests. Thus, according to economists, the area of forest for two hundred years was reduced almost 2 times ⁷, as earlier the productivity and forest reserves were determined by natural reforestation and climatic conditions of the environment. The current situation of exploitation of natural resources is changing and now the productivity and reforestation are closely related to the technical level of production. In the Nordic countries with their developed timber industry, reforestation lagged from commercial timber production, which led to a decrease in accessible and usable forest areas. Another determinant of declining competitiveness of northern forest industry was the intensification of the timber production in economically developing countries, working in the fast-growing southern woods. Traditional leaders, thanks to large reserves of wood and fast-growing low-cost manufacturing [3, p.126—134], which makes production more cost-effective and attractive in the global market [5, p.111—120], are pressed more and more by Latin America (Brazil and Chile), as well as Indonesia and South Africa. Analytics predict the increasing generation capacity of eucalyptus pulp, which will lead to even greater intensification of competition due to an increase of fiber production ⁸. The same analytics say that the moderate increase could be observed for next couple of years due to timber production in Latin America and Asia ⁹. Moreover, the increase in the volume of production in Latin America and Asia will be offset by a decline in North America and northwestern Europe. According to the UN researchers, in the future development of the market for forest products with high added value will be uneven, with some increase in the US imports and low levels of production and exports in Europe ¹⁰. With the growth of world consumption of forest products (Table 1), and shifting the focus of wood

⁷ URL: <http://www.ereport.ru/articles/mirecon/mirres.htm> (Accessed: 25.01.2015).

⁸ URL: http://www.unece.org/fileadmin/DAM/timber/efsos/R_EFSOS.pdf (Accessed: 20.01.2015).

⁹ URL: <http://www.lesonline.ru> (Accessed: 21.06.2014).

¹⁰ URL: http://www.unece.org/fileadmin/DAM/timber/publications/R_EFSOS.pdf (Accessed: 20.01.2015).

harvesting and processing to the southern forest zone, where logging and wood processing is carried out not at the expense of innovations and intensification of production but, mainly, due to the extensive use of forest resources. But there is a conditional positive point for the northern areas in reducing the competitiveness of the northern forest industry, which manifests itself in a weakening of pressure on forest reserves, as well as the time to upgrade logging, wood industries and pulp and paper industry.

Table 1

World production of timber in 1980 and 2013¹¹

Products	1980	2013	Increase, %
Total (thousands, m ³)	1 968 195	2 291 659	116.4
Lumber (thousands, m ³)	420 868	413 975	98.4
Fiberboard, MDF, isolation boards (thousands, m ³)	16 961	112 392	662.6
Veneer, plywood, particleboard (thousands, m ³)	84 370	203 007	240.6
Wood, wood chips, waste (thousands, m ³)	144 959	1 381 792	953.2
Fiber and waste paper (thousands, t.)	183 470	497 114	271.0
Paper and cardboard (thousands, t.)	169 357	396 901	234.4

So, for countries like Norway, Finland, Sweden and Canada the forest industry has become a significant branch of international specialization and a source of foreign exchange earnings from the supply for the world market (Table. 2) and therefore forests are harvested in large areas [5, p. 26-44].

Table 2

Total production of lumber in 1980 and 2013 in Norway, Finland, Sweden, Canada and Denmark

Products	1980	2013	Increase, %
Lumber (thousands, m ³)	217 859	254 871	123.5
Fiberboard, MDF, isolation boards (thousands, m ³)	1 029	1 719	117.0
Veneer, plywood, particleboard (thousands, m ³)	7 602	12 757	167.1
Wood, wood chips, waste (thousands, m ³)	88 663	120 769	167.8
Fiber (thousands, t.)	39 527	47 718	136.2
Paper and cardboard (thousands, t.)	27 089	34 374	120.7

In spite of the increase in timber production in the Nordic countries, there is growth in rates from 1980 to the present period, below the pace of global output of the PPI (Table. 1 and 2), indicating that structural changes in forestry production and wood industries, as well as reducing competitiveness of the pulp and paper industry. In 1980 the five Nordic countries had 16.1% of the global timber production, and in 2013 — 17.0%. As you can see, the overall share of timber production in the last forty years has not changed substantially and is not indicative for certain

¹¹ FAOstat. URL: <http://faostat.fao.org/> (Accessed: 21.01.2015).

industrial products. Nevertheless, the background of the growth of world output contains a significant decline in the share of the production of specific wood materials (more than 7 times) and wood building materials (Table. 3). Also, the negative trend is observed in the production of deep processing products. Thus, the share of world production of fibers, paper and cardboard decreased a half. The equity growth in the global production is about 10% for thirty years.

The leader in timber production and export is Canada with volume of timber production equal to 265 mln m³ in 2013 (in 1980 — 188.4 mln m³). In 2013 production of fibers and paper amounted at 20.7 and 11.1 mln tons respectively (in 1980- 20.8 and 13.4 mln tons).

Table 3

***Share of Norway, Finland, Sweden, Canada and Denmark in the world timber production
in 1980 and 2013***¹²

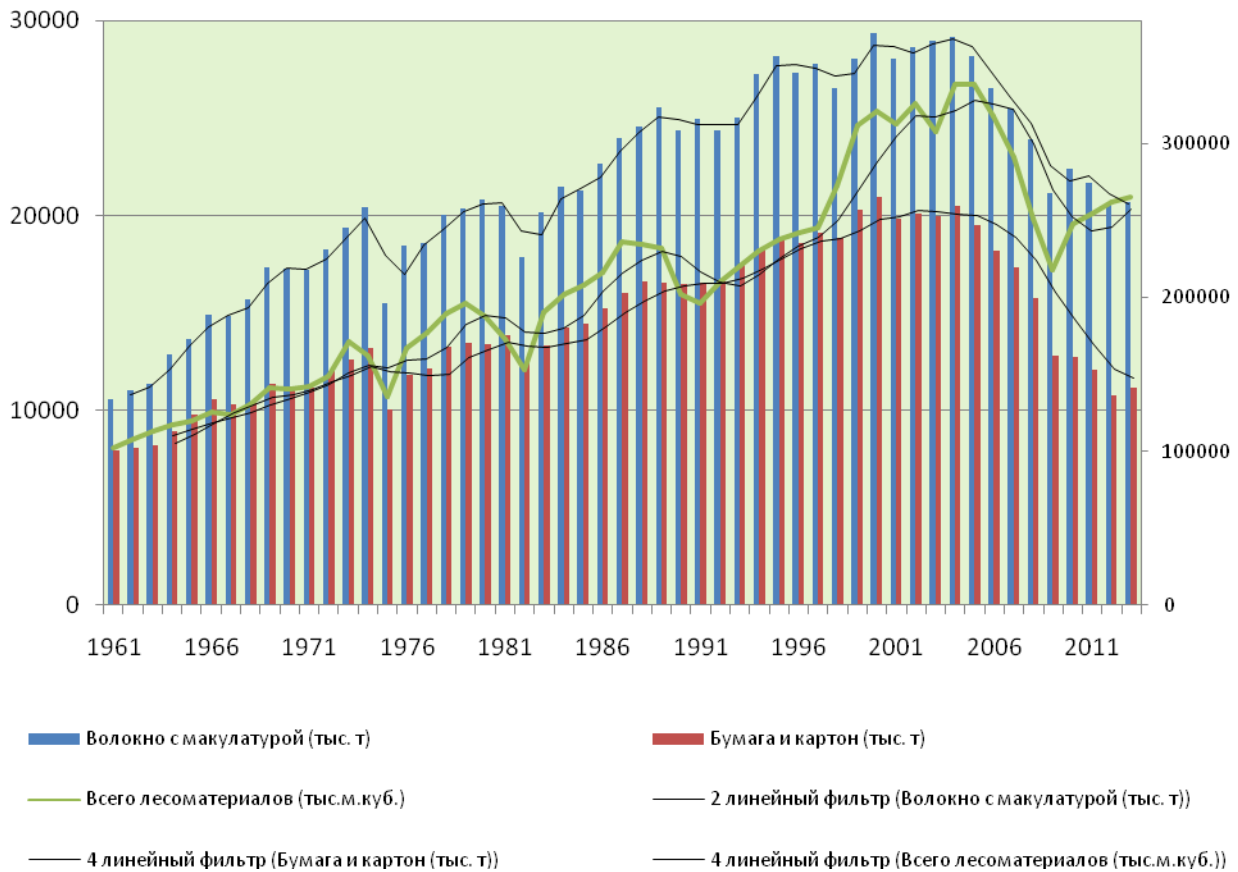
Products	Share in the world production, %	
	1980	2013
Lumber (thousands, m ³)	51.8	61.6
Fiberboard, MDF, isolation boards (thousands, m ³)	6.1	1.5
Veneer, plywood, particleboard (thousands, m ³)	9.0	6.3
Wood, wood chips, waste (thousands, m ³)	61.2	8.7
Fiber (thousands, t.)	21.5	9.6
Paper and cardboard(thousands, t.)	16.0	8.7

The dynamics of timber production industry of Canada revealed its synchronous nature of the development of the trend for different types of products before the 2008-2009, before the large-scale economic crisis (Pic. 2).

The timber production is going up 2013, but Canada failed to reach the pre-crisis volumes of production. A more significant decrease was observed in the production of paper and board, where in 1999-2004 the decrease was replaced by stagnation downtrend. In addition, it is important to highlight a cyclical trend component in the time series of manufacturing of wood, fiber and paper.

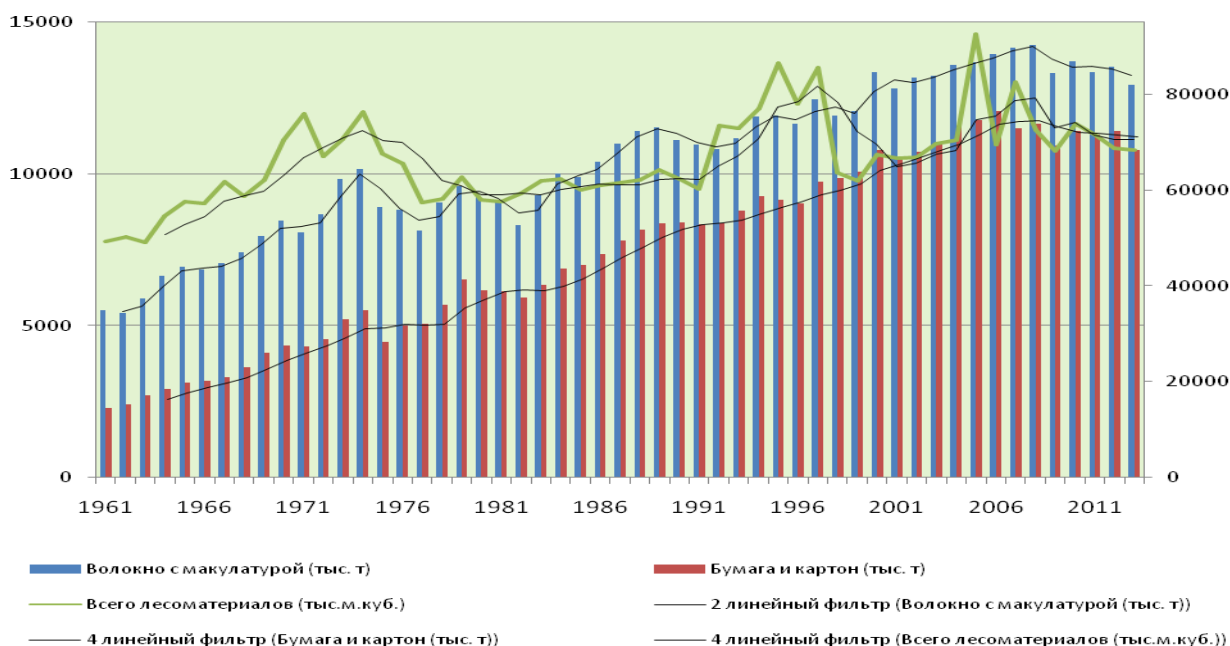
¹² FAOstat. URL: <http://faostat.fao.org/> (Accessed: 21.01.2015).

¹³ FAOstat. URL: <http://faostat.fao.org/> (Accessed: 21.01.2015).



Picture 2. The dynamics of the timber production in Canada in 1980—2013.
 URL: <http://faostat.fao.org/> (Accessed: 21.01.2015).

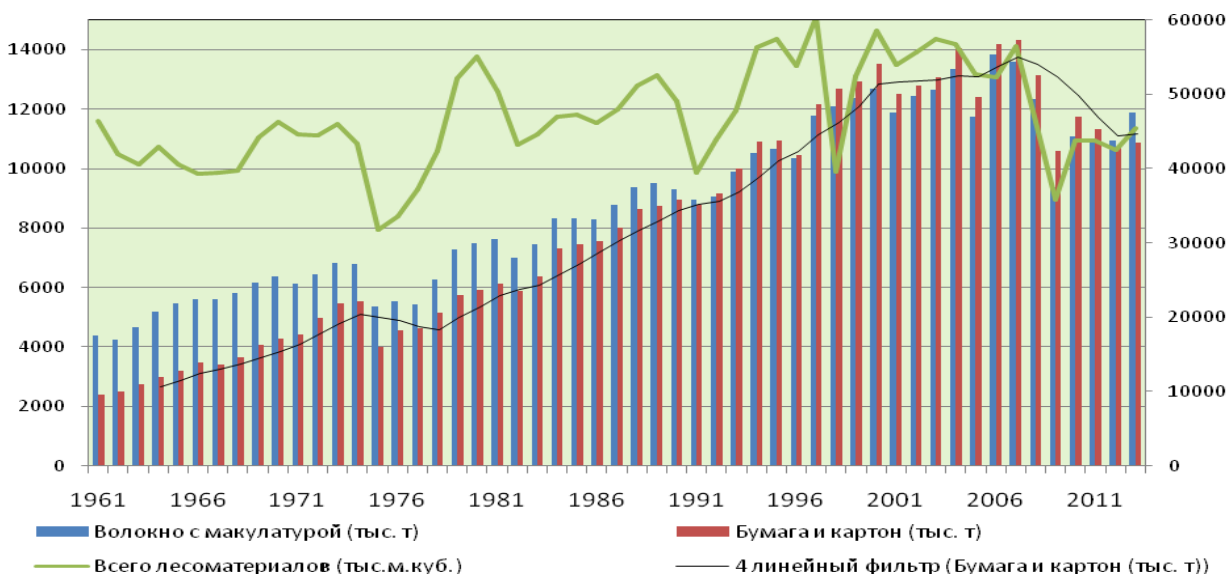
Significant volumes of production are concentrated in Sweden (Pic. 3). In 2013 it amounted to 68.4 mln m³ that is 18% more than the indicators recorded in 1980. But the past fifty years of timber production show unstable dynamics with a small positive trend, and irregular cycles (Fig. 3). Significantly higher growth rates were achieved by Sweden in 2013. It was 39% compared to 1980, and paper and cardboard production — 74% (in 2013 the production amounted to 12.9 mln t. and 10.8 mln t. respectively). So, the dynamics of paper and cardboard production represents a positive trend.



Picture 3. The dynamics of the timber production in Sweden in 1980—2013.

URL: <http://faostat.fao.org/> (Accessed: 21.01.2015).

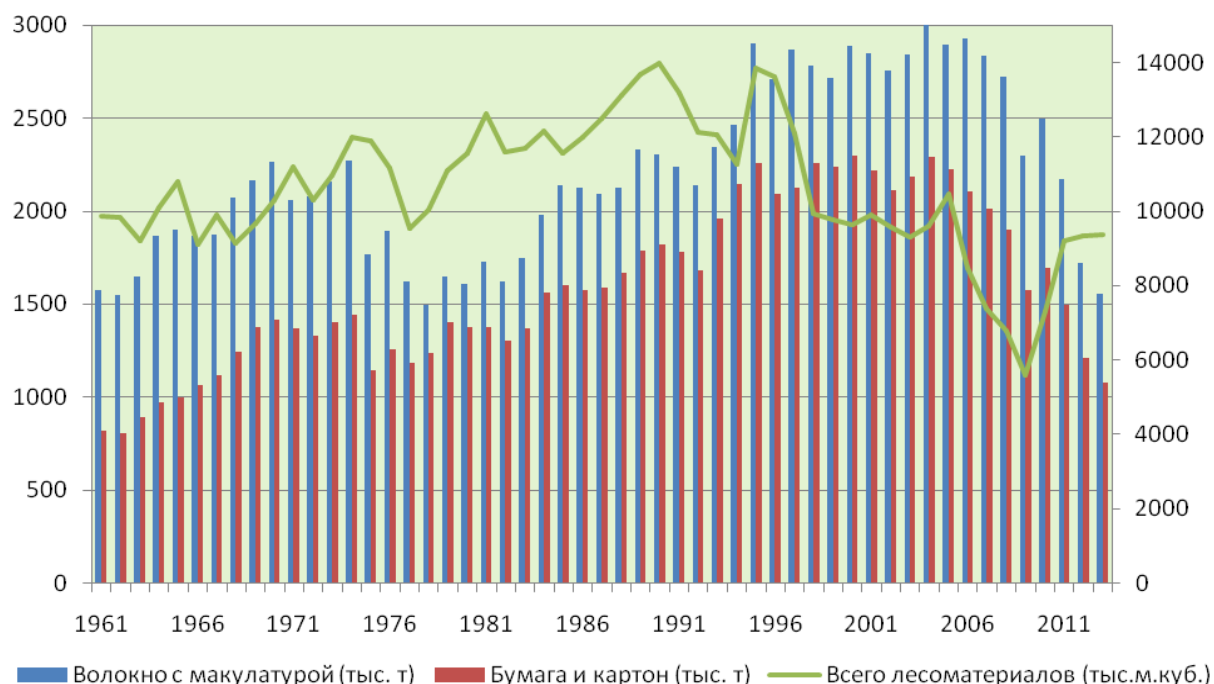
The third leading manufacturer and exporter of wood products is Finland with the volume of timber production of 45.5 mln m³; fiber production — 11.9 mln tones; paper and cardboard — 10.8 mln tons. As for Sweden, there are uneven movement in forestry production and (Pic. 4). But the pulp and paper production has positive dynamics in crisis years 2008 and 2009, after which the Finnish manufacturers were trying to increase volumes of production up to the maximum set out in 2005-2007 (13.9 mln tones of fiber; paper and cardboard — 14.3 mln m³) with no result.



Picture 4. The dynamics of the timber production in Finland in 1980 — 2013.

URL: <http://faostat.fao.org/> (Accessed: 21.01.2015).

Respectively smaller timber production has Norway, especially if we compare it with Canada, Sweden and Finland. In 2013 the volume of timber production was 9.3 mln m³; fiber — 1.6 mln tones; paper and cardboard — 1.1 mln tones (Pic. 5).



Picture 5. The dynamics of the timber production in Norway in 1980 —2013.
URL: <http://faostat.fao.org/> (Accessed: 21.01.2015).

Dynamics of timber production in Norway differs from Canada, Sweden and Finland, which manifests itself in an earlier decline (since 1995). The same is observed in the dynamics of paper and cardboard production with its maximum capacity reached by 2004 (2.3 mln tons) and shifted to a currently ongoing decline. A similar tendency is observed in the fiber production (Pic. 5). These trends began after a large-scale development of the southern forest industry that has damaged less competitive, countries like Norway, due to the small volumes of production and exports there.

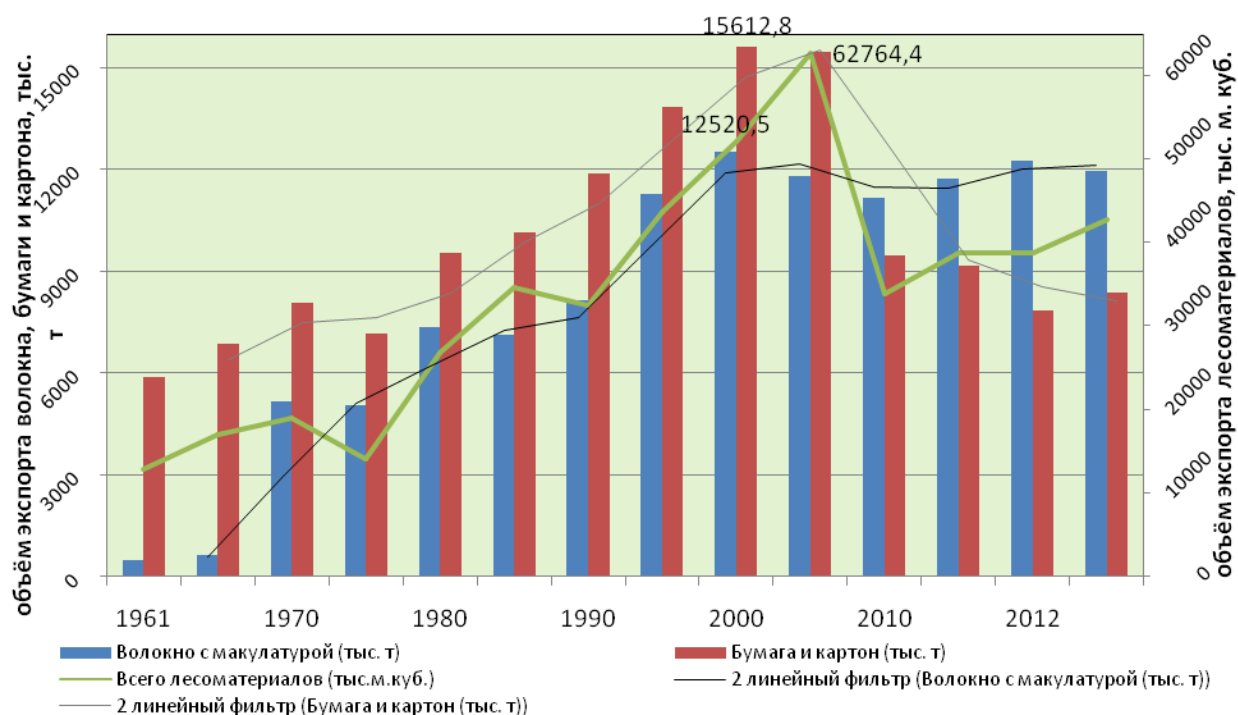
The place of the northern forest industry in the global market depends not only on production volumes, but export and its ability to meet the needs of other countries. Leading exporter of timber materials to be analyzed first is Canada, but Sweden and Canada are prevailing in the supply of paper and cardboard in the world market (Table. 4). These countries also supply the world market with a large volume of chemical fiber intermediates.

Table 4

Export of timber products in Norway, Finland, Sweden and Canada in 2013¹³

Export	Canada	Sweden	Finland	Norway
Total (thousands, m ³)	28417,9	11611,5	7139,0	513,8
Lumber (thousands, m ³)	624,0	9,4	3,6	34,4
Fiberboard, MDF, isolation boards (thousands, m ³)	5489,1	74,7	37,7	126,6
Veneer, plywood, particleboard (thousands, m ³)	7967,0	1036,0	1740,8	2665,1
Wood, wood chips, waste (thousands, m ³)	267,0	231,9	531,1	1136,1
Fiber and waste paper (thousands, t.)	11975,0	3885,0	3210,6	842,6
Paper and cardboard (thousands, t.)	8366,0	10132,4	9862,8	984,1

Dynamics of export supplies of wood and paper materials in Canada from 1961 shows a positive trend and the cyclical over time (Figure 6). The maximum level of deliveries to foreign markets reached Canada by 2005, after which there is a decrease from the critically low volume of deliveries during the global economic crisis.

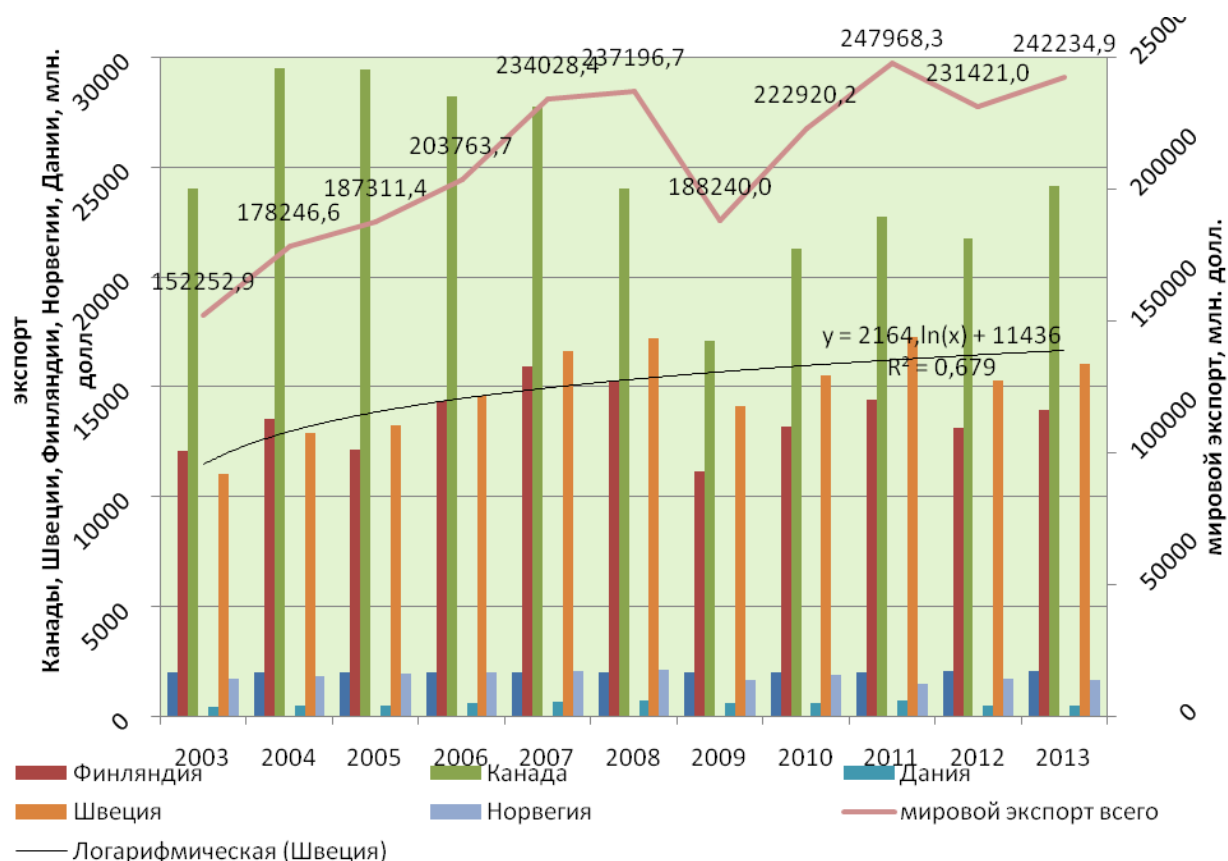


Picture 6. The dynamics of export of timber products in Canada in 1961 - 2013

URL: <http://faostat.fao.org/> (Accessed: 21.01.2015).

Finland, Sweden and Norway had the same situation with the timber products export in 2008-2009 and then — a decline.

¹³ FAOstat. URL: <http://faostat.fao.org/> (Accessed: 21.01.2015).



Picture 7. The dynamics of value of the timber products export in 2003—2013// FAOstat.
URL: <http://faostat.fao.org/> (Accessed: 21.01.2015).

A more positive tendency and 45% growth occurred in Sweden over the past decade. Despite the stability of exports of Scandinavian countries and Canada and the growth of commercial timber supply in Sweden, the total share of world timber trade balance since 2003 has been steadily decreasing since the production and consumption of forest products in the world increases. Thus, the total share of the circumpolar countries in exports in 2013 amounted to 23.2% of world exports of forest products, and decreased by almost 9% since 2003. Only Sweden was increasing the export of timber and was able to reach the pre-crisis volume of export by 2011.

Results of our study show an increase of problems in the forest industry of the Arctic states, due to the shortage of raw materials for the northern forest industry, difficult conditions for reforestation and logging, which has transformed into “acute crisis in meeting the needs in the forest raw material for pulp and paper industry” [6, p.26-44]. Demands for forest raw materials are increasing not only for the northern timber merchants, but also for companies operating in the southern wood harvesting as the world timber production grows (2 billion m³ in 1965 and 3.8 billion m³ in 2013¹⁴). According to the forest inventory conducted by the United Nations, nearly half of the total volume of timber harvested is used as fuel wood, which, in terms of innovative

¹⁴ URL: <http://www.lesonline.ru> (Accessed: 21.12.2014).

development, should be unacceptable. Therefore, the main task of forest management in the North becomes the “persistence and sustainable use of forests, combined with the possible extraction of the highest income” [5, p. 111-125]. Another important area for the northern forest industry is their need in innovative use of forest raw materials; and this implies a full structural and technological modernization, taking into account environmental factors; it is possible with a large-scale investment by not only private corporations, but the state too, as today about 84% of the world forests are in the public (state) property. It should be noted that an innovative development of global forest industry is going on and some success has been achieved. New, more sophisticated and cheap methods of production are developed, using such methods as pyrolysis, gasification of biomass and hydrolysis, which increase the efficiency of production technology¹⁵. Improved production methods allow obtaining new composite materials and modified products of wood. Innovative development of the timber industry and the maintenance of ecological stability could be ensured only by effective financial activity. Therefore, it is important to increase the competitiveness of the Northern timber production in the world market. Development of the northern forest industry would not only contribute to their cost-effectiveness, but would help to ensure the stability of the socio-demographic situation in the Arctic.

Conclusion

This article attempts to uncover the underlying causes and problems of the northern forest industry, negatively affecting the economy of the countries and the ecological mechanism of equilibrium use of forest resources in the region.

Results of our research show the presence and strengthening of the economic and environmental balance problems in the Nordic forest industry, solution of which can motivate members of the forestry sector to conduct a large-scale modernization. Arctic Ecological interdependence with the planetary processes, balanced ecological and economic development of northern industry would, in our opinion, have a positive effect on the sustainability of the Arctic region. Also, there are some other issues of sustainable and balanced development of ecology and economy in the Arctic regions that require further research.

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Monitoring of internal and external factors of strategic development of the Solovetsky archipelago: working out a “factor’s network”



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Abstract. The article contains recommendations on monitoring the internal and external factors of strategic development of the Solovetsky archipelago and studies the methods of environmental factors analysis in the strategic territory marketing. The author defines the concept of “factor’s network” and considers it as a complex system of interactions between factors. The role and contribution of the factor’s monitoring subsystem in the strategic management system is discussed as well as the necessity of the analytical work for the process of a territory strategic development.

Keywords: *the Solovetsky archipelago, monitoring, internal and external factors, methods of environmental factors analysis, territory marketing, strategic management, “factor’s network”*

Introduction

Monitoring of internal and external factors of the environmental management of the Solovetsky Archipelago is necessary due to increased demand in long-term strategies for the development of unique islands in the White Sea, located in the Arkhangelsk region. Competitive conditions of modern market economy have high requirements for strategic management, as well as the marketing approach for the management of territories.

The purpose of this article is to analyze the current models of monitoring of factors internal and external environmental administration of the Solovetsky Islands in the context of increased importance of strategic marketing management and to present approaches for so-called “network factor” of the territory.

The research is focused on the mechanisms suitable for monitoring the internal and external factors of the environmental management of the territory of the Solovetsky archipelago.

The object of this research is the unique area of the Arkhangelsk region — Solovetsky Island. In July 2013 the Government of the Arkhangelsk region developed and approved a legal act called “The development strategy of the Solovetsky Archipelago — a unique object of spiritual, historical, cultural and natural heritage as a separate component of socio-economic development of the Arkhangelsk region up to 2030”, which identifies the main problems of the Solovetsky Archipelago, represents the results of its SWOT-analysis, formulates strategic goals and objectives; contains a long-term forecast of its economic development and prospects of socio-economic development.

The Strategy defines the mission of the Solovetsky Archipelago, as follows: “The Solovetsky archipelago is a national and world spiritual, cultural and natural heritage, the spiritual center of Orthodox Russia, which provides the formation and perception of traditional values with developed hospitality industry, created on the basis of a modern infrastructure, environmental balance and respect for the historical and cultural heritage of the population, pilgrims and tourists”. The mission of the Solovetsky Archipelago is reflected in: 1) the preservation of the triune — the spiritual, cultural and natural heritage of the Solovetsky Archipelago; 2) use of the triune potential of the Solovetsky heritage for spiritual, moral and cultural influence on a society (Russian and international); 3) the creation of decent conditions for work, life and social life of the people of the Solovetsky Islands ¹. In my opinion, Solovetsky Islands could also become a scientific, educational, tourist, economic and etc an attractor and a development catalyst of the Arkhangelsk region.

Key factors of the Solovetsky Archipelago development

In the modern management theory the starting point of administrative influence is setting goals, which involves, first of all, a comprehensive analysis of internal and external environmental management in a particular case and the territory. Some well-known techniques could be used: SWOT-analysis, SNW-analysis, PEST-analysis and others, combined with the surveys. Thus, the author of the article has studied the local environment of the Solovetsky Archipelago during the summer tourist season 2012–2013 with the help of observation techniques and survey, which showed a high level of social tension, distrust and pessimism connected with possible positive changes in the local life. In this regard, the management of the territory of the Solovetsky Islands requires a marketing approach aimed at fulfilling the needs and demands of the local population (infrastructure, information, social, cultural, and others.) Application of the marketing approach will help to meet the needs of other participants of the development process, both internal and external ones.

¹ URL: http://mysolovki.ru/archipelago/events/other/Project_strategy.pdf (Accessed: 01.02.2015).

Modern science develops such an approach as marketing of territory or territorial marketing, which involves the development of the mission, objectives and marketing strategy based on the monitoring internal and external environmental management of the territory. These monitoring systems are needed to achieve the goals and to implement strategies in order to make necessary adjustments, as well as to create a feedback mechanism able to ensure the effective functioning of planning and control systems.

Recently a Russian researcher and a manager of the Guild of Marketers A.P. Pankrukhin has defined marketing of territories as follows: “It is a research, a specific project management and a practical work with the customer value areas that are relevant to citizens, tourists, businessmen, investors — all those who could help the development of territories” [1]. The researchers noted that “with respect to their target audiences, the MT (MT — marketing of territories. — Author’s note) in Russia is experiencing a clear preference to the investors and almost exclusively towards the exterior” [1]. And not enough attention is paid to the internal factors of the territory. Also, the researchers indicated the following problem: “It is too little attention paid to the problems of the living costs in a particular area. It is not limited to such famous figures as the gross domestic product per capita, labor costs and the consumer basket, the cost of housing and the provision of social benefits. The term “pricing” in the marketing of the territories is undeveloped clearly: both in its theory and practice” [1]. In the context of the present publication, we note that the development of a monitoring the attractiveness of the area, requires the analysis of the quality of life subsystem.

All environmental control factors of the Solovetsky Archipelago could be divided into two groups — internal and external factors.

Table 1

Common development factors of the Solovetsky Archipelago

External factors	Internal factors
a) Political and legal factors (law, budget and tax policy, authorities’ relations).	a) Social and demographic issues (demographic situation and human resources).
b) Economic factors general economic situation and its indicators).	b) Location and ecological factors.
c) Social factors (living rates of the population).	c) Management of the Solovetsky Archipelago.
d) Technological factors (technologies used in ecological, financial, educational and tourist spheres).	d) Historical and cultural heritage.
e) Territorial competition factor (relations with existing or possible partners, position in the external environment).	e) Infrastructure (housing service, transport, tourism and etc.).
	f) Welfare.
	g) Investments and attractiveness for tourism.
	h) Small business development.
	i) Brand of the territory.

It is important to note that the most significant area for analysis of the internal and external environmental factors of the territory is not only their identification and quality, which is

usually done in practice, limited to the first stage, but also the ranking, comparison with the identification of coherence and contradictions and quantification of factors. Leading control bodies of the Solovetsky archipelago, interested in various types of activities in this area and, hopefully, in its comprehensive development, and could be divided into internal and external actors, respectively.

The internal factors of the Solovetsky archipelago include permanent population of the Solovetsky settlement, their living standards, employment and other socio-economic characteristics; village administration and management; the regulatory role of the Government of the Arkhangelsk region and the Agency of Solovetsky archipelago development; the diverse activities of the Solovetsky monastery, Solovetsky Museum-Reserve, Solovetsky Maritime Museum and other “city-forming” organizations on the islands; commercial activity, hotel services and etc. We should also take into account the importance of the Solovetsky forestry, housing services, JSC “ArhoblEnergo” — its Solovetsky branch, social, cultural and other organizations that play a key role in the daily life and development of Solovetsky Islands. All listed companies create a complex network of interacting factors of the Solovetsky archipelago internal environment where the partnership is vital.

According to the author, one of the most important internal factors is local population. The internal environment management is a fairly closed and narrowly limited local environment; it is the limited ability to attract qualified professionals as well as individuals because the amount of professionals on the islands is small. So, the main resource of the territory of the Solovetsky Islands is recognized as local residents. Solving the major problems of labor activity, training of specialists, as well as improving the culture of the local population should be a priority in the development strategy of the Solovetsky archipelago.

Vicar of the Spaso-Preobrazhensky Solovetsky Monastery Archimandrite Porfiry, who is also the director of the Solovetsky State Historical and Architectural Museum-Reserve V.V. Shutov, noted in an interview for “Patriarhiya.ru”: “the recovery dynamic of the monastery should be accompanied by the creation of the modern town with developed engineering and social infrastructure, beautiful and convenient village to stay. In connection with these large-scale programs there is a demand for labor, highly skilled and highly paid. The opportunity of the local people is to take the open jobs positions to preserve the ancient architecture, to protect the unique nature of the island, serve the guests, pilgrims and tourists from all over the world”[2]. Thus, the implementation of the Solovetsky archipelago development strategy is expected to active use of the local potential.

In previously published research papers the author emphasized that in Solovetsky islands “should make the transition to a long-term development of new principles — the principles of partnership and cooperation”; “Contradictions of different Solovetsky powers” are necessary to be smoothed by creation and functioning of the single administration and establishment of a partnership system of all interested organizations” [3]. Authorities responsible for decision-making at the local and federal levels, as well as other bodies responsible for the control of the area should be aware that a key partner in solving problems and achieving the sustainable development is the local population. The local residents’ potential is necessary to implement the development programs.

External factors of the Solovetsky Archipelago development include the impact of federal executive authorities and the Moscow Patriarchate; the activities of scientific, educational and public organizations interested in the study and development of Solovetsky islands; operation of commercial organizations and non-residents engaged in services for pilgrims and tourists. Necessary limitations associated with a special status and value of the Solovetsky Islands, however, in our opinion, should provide favorable conditions for the development of entrepreneurship there, attracting investments, providing research that could meet the needs of both internal (e.g. local residents) and external (e.g. pilgrims, tourists and scholars) consumers and service providers of the Solovetsky Islands.

To monitor internal and external environmental factors of the territory, except for the above-mentioned methods of the SWOT-analysis, SNW-analysis and PEST-analysis, we applied the expertise. Expert methods allow obtaining the estimates of the problem based on the views of a group of experts. Joint expert opinion is more accurate than the individual opinion of each of the experts. This method could be recommended for quality assessments of ranging the environmental factors of territories combined with the analysis of these factors. Associate Professor T.P. Koroleva in the article “Methods of the factor analysis of the self-development of a municipality”, notes: “in addition to the traditional set of factors in the practical analysis of the external environment experts should consider external influences specific to the establishment of a particular municipality” [4]. The researcher lists the internal and external factors of development of municipalities, resulting in concrete form — a table that will help the experts to point out that “more accurately assess the significance and impact of environmental factors is possible only if you familiarize yourself with the information and statistical data on the analyzed factors” [4]. Thus, the analytical monitoring activities of internal and external factors of the environmental

management of the Solovetsky archipelago seems to be primary and most important and ensures the efficiency of the strategic management of the territory.

A part of the marketing approach to strategic management of the Solovetsky archipelago is to highlight the main consumers (primarily external) of the unique spiritual, historical, cultural and natural heritage of Solovetsky Islands (Table 2).

In the structure of external customers we are able to divide 4 groups:

1. Tourists — visitors of the Solovetsky Islands with recreational and study objectives. Currently, the share of tourists in the structure of visitors of Solovetsky Archipelago prevails. Thus, according to an official report of the Solovetsky Museum-Reserve, in 2013 excursions were granted to 19,726 Russian and foreign citizens ². In 2014 Excursion Bureau of the Solovetsky Museum-Reserve provided 21 416 people (incl. 1 500 foreigners) with its services or 79,123 visitors (total amount of sold tickets); 8.6% more than in 2013 ³.
2. “Special tourists” — visitors interested in active learning and development of the territory: researchers, scientists, students, post-graduates, participants of conferences and symposiums and representatives of government and business. So, Solovetsky Islands are regularly visited by research staff, graduate and undergraduate students of the Northern (Arctic) Federal University and the Moscow State Institute of International Relations; the Islands host the PINRO research base. Russian President Vladimir Putin visited the Islands in 2001. Senior representatives of various ministries and departments of the Russian Federation come to visit the Islands regularly. It should be noted that the cultural-historical and natural potential of the Islands is huge and constantly needs qualified experts to conduct a variety of research and work in the Archipelago. So, the Islands require financial, legal and information support specialists and experienced research groups.
3. “Seasonal workers” visit the Solovetsky Islands in the summer for 1-6 months: guides, archaeologists, restorers, students, waiters, maids, chefs and others. During the summer season Solovetsky Archipelago is visited by 25,000-30,000 tourists; local residents cannot meet the demand for skilled workers and therefore need additional staff to serve guests.
4. “Pilgrims” — Solovetsky Islands are visited by a great number of religious purposes. The Solovetsky monastery is a spiritual center of Russia and serves as one of the main Orthodox religious organizations of the Russian Orthodox Church called “Savior Transfiguration Solovetsky Monastery Stauropegial”. Now we are observing the increase in the share of

² URL: [http://www.solovky.ru/data/files/docs/report 2013.pdf](http://www.solovky.ru/data/files/docs/report%202013.pdf) (Accessed: 03.02.2015).

³ URL: <http://www.solovky.ru/reserve/ties/releases/2014/10/27/352.shtml> (Accessed: 03.02.2015).

pilgrims among the visitors of the Solovetsky Islands, which is probably associated with the religious revival and Orthodox traditions in our country [5].

Table 2

Segmentation of consumers of the Solovetsky Archipelago and their monitoring

Segment of consumers	Recommendation on consumers monitoring
All segments	It is necessary to monitor the external and internal factors affecting the development of the Solovetsky Archipelago with the use of certain models and technologies. So, there is a need in a Center for Environmental Factors Monitoring. Actual and relevant information would help to correct the development of the territory, distribute resources and contribute to the local management (planning, establishment, motivation and control).
1. Tourists	The Excursion Bureau of the Solovetsky Museum- Reserve should have surveys for tourist all the year round. It is also recommended to monitor the Internet sources, social networks and mass media, and to study the experience of other regions of the RF and foreign countries. It is necessary to use the museum's web page and social networks more actively, especially when getting the feedback from the visitors. Expert surveys would be helpful when getting the concrete information on development of tourism on the Islands.
2. "Special tourists"	To study the "special tourist" we need to interact with educational and scientific institutions of the region and with the governmental bodies and social service agencies. Key points here are the expert evaluations. Present area of study needs a lot of time, money and management resources.
3. "Seasonal workers"	Monitoring of seasonal labor activities could be done with the use of observation methods, surveys and complex technologies like "mystery shopper" or "360–attestation". Major objectives here are increasing the motivation of seasonal employees and their professional level and harmonization of relationship with the other segments on the same territory.
4. Pilgrims	Due to the constant increase of the number of pilgrims coming to the Solovetsky Islands, the services should be changed for them: more effective planning and comfort are required. So, it is recommended for the Pilgrim Center of the Monastery to do surveys for pilgrims and experts.

We should note that monitoring of segments requires both quantitative and qualitative information about conditions and development, so the methods of observation and survey combined with expert evaluation procedures are recommended.

Thus, the key to the management of the Solovetsky Archipelago is monitoring and comparison of internal and external environmental factors for setting the “right” goals and to develop an adequate strategy. Also, the monitoring plays an important role in working out the development strategy, analysis of the critical deviations and their correction if necessary.

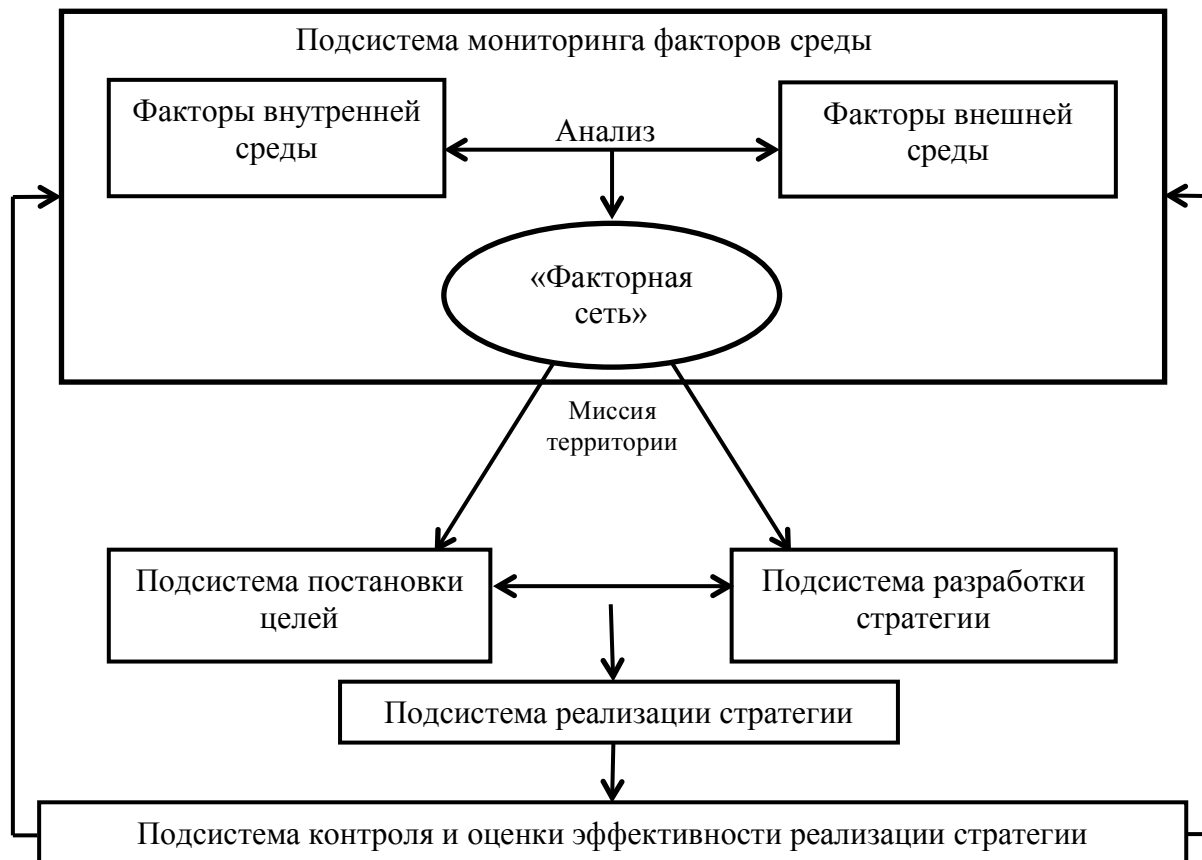
In my opinion, adequate environmental internal and external factors are (Pic. 1):

- 1) to make a comprehensive monitoring of the impact with the ranking of internal and external environmental factors;
- 2) to compare the internal and external environmental factors; to build a “factor network” (the concept is discussed further. — Author’s note.); describe the nature, direction and strength of the interaction between the factors;
- 3) to use the concept of partnership, taking into account the interests of different actors responsible for the control over the territory (internal and external), the mission of the Solovetsky Archipelago, and formulate strategic, tactical and operational development of the territory;
- 4) to formulate a strategy for the development of the territory, able to achieve all the goals;
- 5) to develop a strategic plan for development of the Solovetsky archipelago, as well as targeted programs for specific areas requiring special attention (infrastructure, research, education and information activities, etc.);
- 6) to establish a regulatory mechanism for monitoring the development strategy, plan and relevant programs;
- 7) in the course of evaluating the effectiveness of the strategy and control information it is necessary to make the monitoring system for the planning and adjustment of goals and strategies, providing it with the relevant feedback.

A key element of the strategic management system of the territory, in our opinion, is a monitoring subsystem, aimed at reliable evaluation and comparison of internal and external factors of the development — “factor network” — is fundamental for strategies. The “factor network”⁴ of the development represents — a comparison of internal and external factors of development of the territory, which involves the qualitative and quantitative assessment of their mutual influence with the mandatory display of visual identity and mutual impacts of the factors, resulting in the correlations between them. This could be represented as a matrix or the formula; its form is determined by the goals and objectives of the study. “Factor network” shows current and potential correlation factors. In our opinion, the main disadvantage during the SWOT-analysis

⁴ The term is suggested by the author of the article / A.Y. Tsvetkov

is the lack of justification for the mutual influence of factors, as well as the absence of quantitative expert assessment of these factors, and therefore may be a gap between the developed strategy and the real state of affairs, which negatively affect the continued strategic management of the territory. Constructing the “factor networks” of the territory could help to avoid this situation.



Picture 1. Strategic management system of the territory

Conclusion

The problems and current models of monitoring of internal and external environmental factors of the Solovetsky Islands were discussed in the context of increased importance of strategic marketing management of the territory.

The “network factor approach was the key issue for understanding the specialty of the territory. Developed model “monitoring — network factor — strategy” (Pic. 1) being a subject to the proper application would be able to improve the efficiency of management by increasing the complexity and consistency of various factors, to reduce the randomness of multi-directional forces and to get positive synergistic effect.

Creation of a system for monitoring the internal and external environmental factors is necessary for the effective strategic management of the Solovetsky Archipelago. A special environment monitoring center of the Solovetsky Archipelago could be an effective tool. Such a center could deals with ongoing analytical work to assess the strength and character of the mutual

influence of different factors, in order to proactive management aimed at reducing negative impacts, and strategic use of positive influence to ensure the sustainable and harmonious development of the Solovetsky Archipelago.

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UDC 94(481).083-054.65(045)

The employment of the Soviet prisoners of war in Norway During the Second World War



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Abstract. The article, based on the foreign and Russian archives, is devoted to the study of employment of the Soviet prisoners of war in Nazi POW camps on the territory of Norway during the Second World War.

Keywords: *the Second World War, Norway, Soviet prisoners of war, POW camps, the employment of POW*

Introduction

This year the world celebrates the 70th anniversary the Auschwitz camp's liberation by the Soviet Army. Keeping the memory of those events, millions of prisoners of the concentration camps scattered throughout Europe during the Second World War and the victims of the Nazi regime plays a significant role in prevent the recurrence of the tragic events which happened in the 1940s. Moreover, the issues, discussed in the article, have not been studied by the national scholars and they are of research interest, especially when it comes to comparing the employment of the Soviet prisoners of war in various countries of the occupied Europe.

Writing this article, aimed at studying the use of the Soviet prisoners of war in Nazi camps in Norway during World War II, a fairly extensive database of foreign and domestic unpublished archival sources was used. Mainly, these were the documents of the State Archive of Norway and the archives of the Museum of the Resistance (Oslo), as well as materials from the State Archive of the Russian Federation (SARF). The author relied on historical-typological, historical-comparative and mathematical methods of historical research.

In the 1930s a powerful totalitarian state — Nazi Germany — emerged on the political map of Europe. That time on the territory of the Third Reich the first concentration camps were created. Since the beginning of the Second World War the camp's system began to grow rapidly throughout occupied Europe. They created new types of camps designed to use the slave labor. The large-scale offensive of Wehrmacht and comprehensive terror made it possible to involve not only the population of Germany, but also millions of prisoners of war and the Eastern European

workers in the German working army. Their hands did industrial, military and agricultural work. Using the slave labor enabled the Nazis to get maximum profits at minimum cost and ensure the growth of the Nazi war machine.

Prisoners of the war as a source of free labor

The first years of the war on the Eastern front, the Nazis regarded the Soviet prisoners of war as ideological opponents waged against them a war of extermination and then by the beginning of 1942 captured the Soviet soldiers became an inexhaustible source of free labor. The idea of mass employment of prisoners of war and captured civilians emerged from the German command in connection with the failure of the “blitzkrieg”. The protracted war required enormous resources: raw materials, technology and human. February 18, 1942 at a meeting in the Reichstag of the “Group on work in accordance with the four-year plan” Mansfield made an official statement: “Current difficulties in the labor would not have arisen if decision on the widespread use of Russian prisoners of war was timely made” [1, p.37]. In this regard, in October 1942, the führer put forward a new emergency armaments program, which included “additional introduction to business of two million foreign workers” [2, p.35].

Among the Soviet prisoners of war there were a large number of professionals in various specialties. Thus, on the 14 October 1941 in the report for the High Command of the Wehrmacht in Berlin, the Ministry of Labour (Reichsarbeitsminister) admitted that among the Russian prisoners of war there “were very valuable to the war effort skilled workers”¹. The report proposed the establishment of special camps for Russian prisoners of war, who were miners, metallurgists, transport workers and workers for forestry, would be brought to further use at the workplaces.

On detection of highly skilled workers among Soviet prisoners became important earlier — in the beginning of the war. On the 14 August 1941 in a letter of the Armed Forces High Command of the Wehrmacht (OKW) to the President of the Labour Exchange a clear guidance on the employment of Soviet prisoners of war was given. According to it, they created a catalog index of professions and formed groups of professionals to work. The letter also noted that the work had to be carried out only under conditions of complete isolation from foreign civilian workers and the local population ².

Until the end of 1941, the Soviet prisoners of war were recruited mainly in agriculture and construction, later they began to be used in basic and military industry. On the 10 January 1942 general W. Keitel signed an order about the use of the Soviet prisoners of war in the military

¹ URL: www.soldat.ru/doc/casualties/book/ (Accessed: 26.01.2015).

² RA. Documents section. Imperial War Museum. Boks 50. FD 5328/45. Serial №1182. P. 17-18.

industry of Germany³. The order required to report on the number of the Soviet prisoners of war, sent by the Exchange of labor to work for the war economy, by the tenth of each month, starting from February 10, 1942.

Table №1 shows that in early February 1942 about 15% of prisoners were working in the military industry and by the end of the war — more than 80%. At the beginning of the war, relying on the “blitzkrieg”, the Nazi leadership did not want to burden them with the alimentation of the Eastern “subhuman”, and military industry assumed relatively higher qualifications of workers. Disruption of “blitzkrieg” on the East and the prolongation of the war led to the mass mobilization and, therefore, the need for slave workers, even for German war industry.

Table 1

The amount of the Soviet prisoners of the war at the OKW camps and their use for German military industry in 1942—1945

Date:	OKW camps	Military industry	Total
1 февраля 1942 г.	1 020 531	147 736	1 168 267
1 сентября 1942г.	1 675 626	375 451	2 051 077
1 февраля 1943г.	1 038 512	493 761	1 532 273
1 августа 1943г.	807 603	496 106	1 303 709
1 марта 1944г.	861 052	594 279	1 455 331
1 сентября 1944г.	905 864	765 444	1 671 308
1 января 1945 г.	930 287	750 000	1 680 287

Camps for the Soviet prisoners of the war in Norway

First camps for the Soviet prisoners of war were established in summer 1941 due to the general guidance on use of prisoners as a source of free labor.

On the 26 February 1940 the Supreme Command of the Wehrmacht published “Considerations of political and administrative activities during the occupation of Norway, Denmark and Sweden”⁴. The paper noted that, first they should set up German military base in Oslo, Arendal, Kristiansand, Stavanger, Bergen, Trondheim, Narvik and Andalsnes. Then it was said about the importance of the work of railway lines Oslo — Lillehammer — Trondheim and Narvik — Riksgrenzen — Lulea [4, p.90]. Establishment of transport system was associated with Nazi plans to use the country's resources for the benefit of the German economy and to create a powerful military base in Scandinavia. Already on the 5 July 1941, the command of the OKW was ordered to send twenty thousand of the Soviet prisoners of war to Norway⁵.

³ Ibid. p. 167.

⁴ Мировые войны XX века. Книга 4: Вторая мировая война. Документы и материалы / Под ред. М.Ю. Мякова. М., 2002. С. 90.

⁵ RA. Documents section. Imperial War Museum. Boks 50. FD 5328/45. Serial №1182. p. 11.

Strait after the Soviet prisoners of war appeared in Norway, they were sent to the three camps — the “Stalags” — distribution points for sending prisoners to labor camps⁶. After “stalag” prisoners were sent to working or building battalions (Kriegsfangenen-Bau und Arbeitsbataillone) and supply battalions. All these units were controlled by the commandant on prisoners of war in Norway — major general Klemm.

In addition to “stalag”, in Mo i Rana there was a special headquarters responsible for working or building battalions of prisoners (Bau-Pionier bataillone)⁷. Its leader was colonel Buschweiser. Prisoners of these battalions were occupied by building a railroad “Norlandsbanen”, constructing of fortifications, roads and logging⁸.



Picture 1. The Soviet prisoners of war in Norway

The report of the Ministry of Labour to the Supreme Command of the Wehrmacht highlights that the major professions, necessary to support the economy of the Reich: miners, metal workers, construction workers, carpenters, transport workers, and even cobblers⁹. Prisoners who had these professions were in demand in Norway. The construction of coastal fortifications, roads, railways, mining, and work at the ports were the main areas of employment of the Soviet prisoners of war in Norway (see Table 2). Also, prisoners were engaged in road construction, construction of industrial

⁶ Первоначально шталагов было четыре, но к 1944 г. шталаг №322 был соединен с шталагом №330.

⁷ Norges Hiemme front museum NHM. FO II. 729/45. Prisoners of war camps in Norway. Boks 9. Enclose 10.

⁸ RA. OAK/DOBN 1a. Boks 0008.

⁹ RA. Documents section. Imperial War Museum. Boks 50. FD 5328/45. Serial №1182. p. 47—48.

enterprises and work for them. In addition, they have been involved in the work for the needs of the German military forces, which included the construction of barracks, surface and underground warehouses, loading and unloading and transport works ¹⁰.

Table 2

Use of the Soviet prisoners of war on the territory of the occupied Norway in 1942 ¹¹

Type of work	Amount of prisoners on the 01.02.1942	01.04.1942	01.05.1942	01.06.1942	Total
Construction of roads:	2 100	4 500		13 000	19 600
a) widening of roads	(8 camps)	(18 camps)		(52 camps)	(78 camps)
b) preparing for winter				14 500	14 500
				(58 camps)	(58 camps)
Aluminum industry		2 000			2 000
		(8 camps)			(8 camps)
Railroad's construction			20 000		20 000
			(80 camps)		(80 camps)
Total (by month)	2 100	6 500	20 000	27 500	56 100
	(8 camps)	(26 camps)	(80 camps)	(110 camps)	(225 camps)

According to the table, only during the first half of 1942 the German command in Norway made 56 100 Soviet prisoners of war work for them. According to the calculations of the author, in Norway during the Second World War, there were about 100 800 Soviet prisoners of war and civilian workers; about 14 thousand of them died in Nazi captivity.

A list of occupations in demand in various sectors of industry and transport was enclosed to the report mentioned above. For example, for the construction of roads: 10% carpenters, 5% cement workers, 5% locksmiths, 20% quarry stone masons, 20% bricklayers and 40% diggers ¹². The aluminum industry required: 60% mole rats, 10% carpenters, 20% of bricklayers and 10% laborers; the construction of railways: 25% of bricklayers, 10% carpenters, 5% locksmiths and 20% quarry stone masons ¹³.

State Commissioner of Norway headed by general I. Terboven was the responsible body for the employment of prisoners of war in the country. The Department of Machinery and Transport of the State Commissariat (Abteilung Technikund Verkerh) led by Dr. Klein developed plans to process information about the scope, extent and results of the work of prisoners at various construction sites. Partly similar functions were the responsibility of the German "Todt Organization". Initially, in 1940, the department planned to use the labor of prisoners of war only in the construction of the

¹⁰ Государственный Архив РФ. Ф. 9526. Оп. 1. Д. 495. Л. 165.

¹¹ RA. Documents section. Imperial War Museum. Boks 50. FD 5328/45. Serial №1182.p. 144.

¹² RA. Documents section. Imperial War Museum. Boks 50. FD 5328/45. Serial №1182. p. 145.

¹³ Ibid.

railway “Nordlandsbanen” and the highway between Oslo and Stavanger. However, the number of prisoners has increased, as well as the opportunity to expand the scope of employment of prisoners in Norway.

During the war the Third Reich in Norway had a special interest for two objects: Northern Railway — “Nordlandsbanen” that supposed to be used for transportation of metals (primarily nickel) for the German economy and the naval base in Trondheim — the most important deterring point for Allies naval forces.

Road construction in Norway became a priority for the employment of the Soviet prisoners of war. Construction of new roads, their repairment, improvement and widening the old ones, cleaning them, construction of railways and roads to the bases and warehouses was done by the working prisoners and construction battalions. Thus, only in 1942, there were eleven major road construction sites where the prisoners worked (see Table 3).

Table 3

Amount of Soviet prisoners of war occupied in road construction in 1941—1942¹⁴

Constructed roads	December — March 1941	April — May 1942	June — October 1942
Fjetland — Dornstadt (widening the road Oslo-Stavanger)	400	400	200
Oslo — Stavanger (100 km of new road)	500	1 500	5 000
Steinkjer — Rissa	500	1 000	2 000
Reichstrasse 50 (along Elsfjord)	300	500	1 000
Bjornfeld (road to Narvik)	200	600	2 000
Skibotn — border with Finland	200	200	400
Reichstrasse 50 (along Kvænangenfjord)	200	400	400
Karasjok — border with Finland	500	500	500
Svanvik — Grensefoss	200	400	1 000
Rognan — Langset (along Saltdalsfjord)	500	1 000	2 500
Widening the Reichstrasse 50		500	5 000
Total	3 500	7 000	20 000

These tables show an increase in the number of the Soviet prisoners of war, engaged in road construction. Their number rose less than 6 times a year, from 3 500 to 20 000 people. The largest number of the Soviet prisoners of war was employed in the construction of the highway to Oslo — Stavanger and widening the road Reichstrasse 50. This was an indication that the German High Command in Norway clearly acted in accordance with the intended objectives during the

¹⁴ Counting is based on: RA. Documents section. Imperial War Museum. Boks 50. FD 5328/45. Serial №1182. S. 74.

occupation of Norway — to turn the country into an important strategic base, implying the possibility of maximum mobility while transporting troops.

One of the most important objects of the railroad construction was the "Nordlandsbanen" between the towns of Kirkenes and Mo i Rana. This road was used for transportation of metals, mined in the depths of Northern Norway, and for all the military transportation. In addition, the road could be used in the case of transporting the German troops to the northern regions to attack the Soviet Union, as there was a host of the Nordic borders.

The "Todt Organization" was competing with the Reichskommissariat of Norway and managed to get a favorable order and the right to build "Nordlandsbanen". Therefore, since 1942, this organization was responsible for the construction works there.

The railroad "Nordlandsbanen" could be divided into two sections: the northern and southern. Both were in the province of Nordland. The northern section from Fauske to Drag (about 130 km) had 23 workers camp with 9 361 Soviet prisoners of war. The southern section of "Nordlandsbanen" from Fauske to Mu had several dozen of camps and prisoners also worked on the construction of this object. The number of the Soviet prisoners of war, engaged in the construction of the southern section of the road, was 11 071 people in May 1945.

Therefore, 20 432 Soviet prisoners were involved in the construction of "Nordlandsbanen" by the beginning of 1945 employed. It was 67 labor camps, accounting for about 26% of all the Soviet prisoners of war in Norway. It is well known that the area also had the highest death rate among prisoners. Therefore, we can assume that the working conditions of the prisoners were extremely hard. Not coincidentally, the historian and publicist O. Storteig called it "blood road" [3].

The protocol of the "Joint Soviet-Norwegian commission on investigation of the living and working conditions of former Soviet prisoners of war in the German-fascist captivity in Norway during the period of 1941-1945" it was noted that "the Soviet people were involved to the most difficult operations. At the same time the work was usually done without any technical equipment" [4]. When it comes to the working day for prisoners of war, it was non-normalized and different everywhere. The duration of the working day varied from 10 to 14 hours, i.e. an average of 12 hours per day. At the same time, the former prisoner K. Serednitsev told: "One day we started to work at night (from 7 pm to 5 am). Usually we worked for 8 hours. We were working to fortify the island. They built concrete bunkers. 10 hours of work in wooden shoes and with such a food — it was just a murder"¹⁵.

¹⁵ Memoirs of K. Serednitsev. From the author's own archive.

Conclusion

The camp management of the Nazi Germany, which aimed, among other things, to control the use of the slave labor of the Third Reich, was successfully performing the assigned tasks during the occupation of Scandinavia. The Soviet prisoners of war were mostly employed in the construction of the coastal fortifications, airfields, railways, highways and naval bases. To a lesser extent, they were employed in the construction industry. The Second World War was a total war, a war of extermination. Understanding this, the participants tried to ensure the replenishment of resources and human as well. In Germany, a specialized paramilitary "Todt Organization" was established in 1938 and subordinated to the Ministry of Arming and Military equipment. Prior to the defeat of the Nazis near Moscow, the "Organization" managed with providing slave workers for the Reich war production. Disruption of "blitzkrieg", which put the Nazi leadership to the threat of a protracted war, the enormous loss of Nazis on the Eastern Front made it necessary to find new ways of early replenishment of manpower.

Comparing the main areas of employment for the Soviet prisoners of war in Norway and Germany, we can draw the following conclusions. Since the Nazi economy had some costs for transportation of prisoners from Germany to Norway, and the creation of a network of camps on the territory of the latter, each prisoner had to "work out" German money. All new coming Soviet prisoners of war and "Eastern workers" from the Soviet Union were sent to specific building projects straight after the arrival.

There were also differences in the employment areas of prisoners of war. In Germany, it was mainly the mining, metallurgy and military industry. A distinctive feature of the employment of prisoners in the Third Reich was their widespread involvement in agriculture and private enterprises. Their owners, as a rule, were interested in the results, so they often resorted to various "positive practices" of stimulation [3, p.152-153]. Norway has also been known for the use of the Soviet prisoners of war by private German firms.

During World War II, Norway played a significant role in the military plans of the Nazi Germany. Norway's infrastructure needed to be widened and improved in order to create a strong foothold of the Third Reich in Scandinavia. According to the plan of the Nazi command, it had to be made with the use of the Soviet prisoners. The main objective of the German command was the use the forced labor of the prisoners of war in the interests of the Wehrmacht.

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Рисунок 1. Просторы Териберки. Фото: Андрей Видякин.
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Обзоры. Reviews

Perm Engineering and Industrial Forum



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Abstract. The article represents the review of materials of the Perm Engineering and Industry Forum held on the 6th-7th of November 2014 in Perm. The Forum represented a project of the federal scale, under which dozens of round tables and seminars on the future of the Russian industry were held. The issues discussed at the Forum and the Resolution are correlated with the new industrialization of the Russian Arctic and the North and with the sixth technological

order transition period.

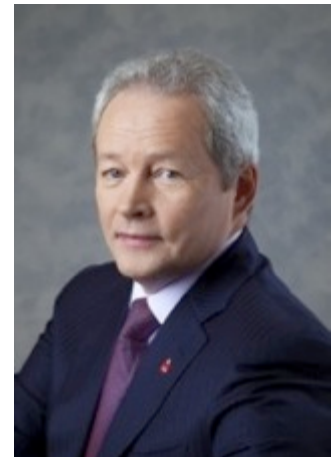
Keywords: *Perm, economics, engineers, clusters, jobs, the sixth technological order, new industrialization*

2014 turned out to be very productive in the scientific and practical Forums on social and economic development and other issues related to the analysis of the situation in the Russian Arctic. It is enough to mention a few of them: St. Petersburg, 10—11 December 2014 — IV International Forum "The Arctic: Present and Future"; 12—15 November 2014 — II International Arctic Legal Forum "Preservation and Sustainable Development of the Arctic: Legal aspects"; Yakutsk, 26—29 November 2014 — International scientific and practical conference "The Arctic: Prospects of Sustainable Development"; Arkhangelsk, 8—10 October 2014 — International scientific conference "The competitive potential of the northern and Arctic regions"; Murmansk, 29—30 May 2014 — V All-Russian marine scientific and practical conference "Russia's national interests and the economy of marine communications in the Arctic" and etc. These Forums discussed the whole range of significant and important issues of the development of Russian Arctic and North.

It would seem that the Forum in Perm is not directly related to the Arctic. However, the problems of the new industrialization, the transition to the 6th technological mode, the training of engineers and the creation of new jobs are not just relevant and carry a powerful charge of innovation, but also have a direct effect on the future of the Russian Arctic and the North of the country, all units of the Russian Federation.

Issues discussed at the Forum and its recommendations are particularly relevant in relation to the rest of us experiencing financial and economic crisis, the need for restructuring the national economy, search for efficient market model and the use of scientific and technological capacity, high-quality training of engineers and the use of technologies of the sixth order. The emergence of new jobs, especially now, in crisis times, is becoming a priority in the everyday activities of the federal and regional administration.

In the speech of the Perm Regional Governor V.F. Basargin it was mentioned that the idea to hold the engineering and industrial Forum was not an accident [1]. Prikam'e (Kama region) could be called a mini-model of the real sector of the Russian economy with its typical achievements and problems. The region has been the military and industrial center of Russia for centuries and now it is experiencing modernization. Here we have large scale investment projects of the "Perm scientific and production instrument-making company", JSC "Proton-PM", "Perm motor factory", "LUKOIL", "Uralkalyi", "Uralhim" and etc. with the total amount of several hundred billions of rubles. The region is active in creation of perspective clusters, IT clusters' projects, chemical cluster, techno polis "Novyi Zvezdnyi" and "Fotonika". It is expected that in the future the products of air and space companies, chemical industry, production of energy (both traditional and alternative), biotechnologies, IT and the leading position will be occupied by engineering, especially the one connected with industrial production [1].



Really dramatic changes occurred in Russian economy, in V.F. Basargin's opinion, when specialist with economic and humanitarian education became the leaders. In Soviet times managers were mostly people with technical education, now they are educated managers. Scientists and people with technical education are the reserve of the present management processes. As the result we are facing a number of problems:

- I. *First.* An acute need in professional engineers, technicians and middle level managers at the workplaces. So, in the next few years only in Perm Region will feel a lack of more than 1,000 engineers a year.
- II. *Second.* Fall of technological culture and discipline.
- III. *Third.* The inertia of thinking of those professionals that have adapted to the existing control system, have lost the desire to look for new ideas and have forgotten reasonable risks.
- IV. *Fourth.* Reducing impact of technical intelligentsia on the social processes.

- V. *And the most important*, the backlog level of scientific and technological production in the areas that the government has not been able to maintain or where responsible business has not come [1].

It is obvious that the future is for the engineering professions, connected with the development of the 6th technological order, which means the creation of a special type of products of the “new economy”. Understanding this, Perm Region created the regional system of the “strategic forecast”; and the Program of the social and economic development of the region has measures for diversification supported by the entire regional cooperation and aimed at prioritizing engineering professionals instead of economists, lawyers and managers. “Today we are sure that during the period 2014—2020 Perm regional companies will need — I am giving absolutely accurate number — 7,785 engineers of a new type. Among them: 2,120 engineers — for machine building complex, 2,150 engineers — for chemical industry, 1,170 — for oil and chemical industry” [1]. New type of formation is going to become the military industrial complex, uniting the Suvorov’s college, other colleges, military institutions and departments of the national universities, established on the factories. This would contribute the close development of education and production and creates the proper environment for scientific and innovative activities.

The Forum set not only the task to create the unified system of engineer education, adopted for the requirements of the modern economy; train teachers for educating new engineers; to involve the scientists and technical intelligentsia in modernization of economy and management, but also to give a real chance for the country and its regions to set the tasks for training engineers and to understand their role in the Russian society. “Algorithm is clear in general. There is a technical forecast for the development of Russia until 2030. It allows evaluating the demand for engineers and technical specialists and to prepare the education system for fulfilling this demand- to establish the adaptation system for new specialists and to provide them with the proper level of salary adequate to their creativity and ability to use perspective technologies — and as the result to bring up the status of “engineer” [1]. It is necessary to use the experience of the institute of “professional engineers”. The person with such a status has a license for the state responsible bodies. The license could be got only by using and developing new technologies, innovations and creative approaches. There was an idea to hold a competition “Engineer of Russia”. Some other interesting suggestions and ideas revealed at the Forum.

Modernization of the Russian economy, transition towards the 6th technological order — these topics were the most discussed at the round table discussions at the Perm engineering and industrial Forum. On the second day of work, the representatives of the state, leading Russian

engineers and scientists tried to define the principles and condition of “new industrialization” at the section “Engineer or Manager?” They spoke about changes of the global trends, “great convergence”, and stabilization of the economic and demographic growth in the world, quality of the human resources: money, materials, space, people and information. The discussion was attended by Sergey Malkov, the leader of ANO “Center of strategic nuclear power” of the Academy of the military sciences; Evgeny Loginov, deputy director of the Institute for the market problems RAS; Sergey Malenko, director of the department for the civil rights and special programs of the Perm Region governor’s administration and other experts [2].

Materials of the other sections, final documents of the first Perm engineering and industrial Forum, held on the 6-7 of November 2014 are available at: <http://engineerForum.ru/fotogalereya/itogovyj-buklet-Foruma.html> and etc. Published “Perm thesis — 2014” contains some significant statements:

1. It is necessary to support the reorganization of the innovative clusters on the territory of the Perm Region.
2. It seems to be important to recommend the development of an interbranch program aimed at forming the professional scenarios for the representatives of various social groups to understand the objectives of the 6th technological order.
3. The Forum participants agreed upon the necessity to create the supportive environment for intellectual production, including the processes of creative communication, analytical, expert and project activity; to coordinate applications for the use of experimental base, equipment and infrastructure
4. The Perm region intends to establish a strategic center to decide the issues of strategic analytics and management assistance in order to meet the challenges of the 6th technological order and to define the management structures and sources of financing for experimental projects.
5. Also the Forum discussed the possibility to host the robo-technical factory, including the idea to buy a new factory by the Perm Region.
6. In 2015 the second Engineering and technical Forum is going to be held again and its topic will be “new industry” and its planning [3].

Global society meets the 6th technological order

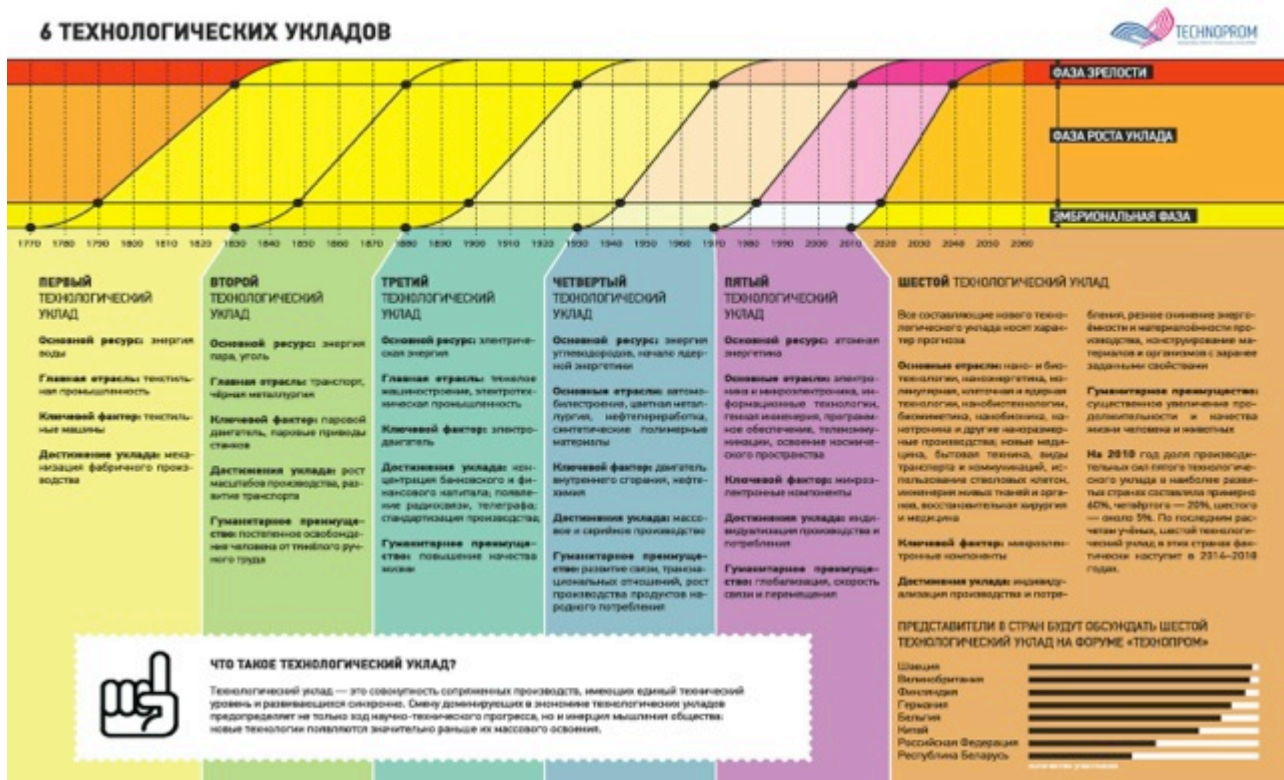
The question of transition towards the 6th technological order was widely discussed at the Forum and on the Internet in the “Perm thesis-2014”, where technological gap between Russian and the rest of the world within the 5th (financial and information) order was the major issue as

well as the risk to stay in that situation and the real opportunity to become the semi-colonial state. So, the only decision is to move towards the 6th order without developing the 5th [3]. The 6th technological order makes the question of the “new type industry” extremely important for Perm and Perm Region. This fact means:

- ✓ Introduction of people-free technologies, robo-technologies and the relevant educational and migration policy.
- ✓ New organization of a “comfort creative environment” combining the global interaction and one area of living, like the CB-settlements.
- ✓ Making priority living and professional scenarios for different social groups.
- ✓ Complex production of goods (territorial clusters, cooperation)(so-called “engineering” approach)instead of “effective” global distribution of production and “spots and components” (“technological” approach); change towards small serials of production.
- ✓ Fast production of a “unique products” with the factory methods.
- ✓ Development of the IKT, bio- and nano-technologies of production; construction of materials, when production of material with the set properties becomes an important part of new engineering.
- ✓ Environmental care should be changed by the rational resource use, i.e. closed production cycles when using non-renewable resources [3].

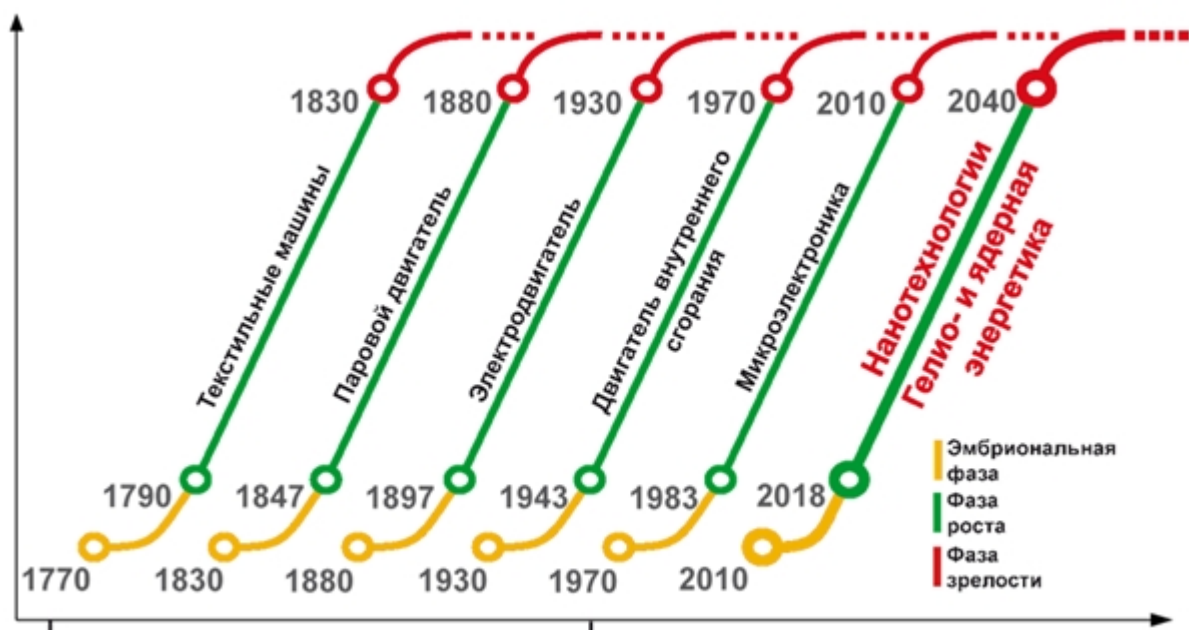
Problems of technological orders were discussed at the other Forums as well. In 2013-2014, for example, there were “Technoprom-2013” and “Technoprom-2014”. On the 4-5 of June 2015 in Novosibirsk there is going to be the International Forum for technological development “Energy of technological development”¹. On the web page Technoprom-2013 you can find the figure “6 technological orders” that allows to see the dynamics of technological development.

¹ Technoprom. International Forum of technological development. URL: <http://Forumtechnoprom.com/page/217> (Accessed: 15.04.2015)



Picture 1. Technoprom. URL: <http://Forumtechnoprom.com/page/217>

The concept of 6 technological orders is now widely recognized. The basic principle for this concept is the theory of “long waves” introduced by N.D. Kondratiev (1892-1938). Academic RAS S.Y. Glazev connected the deep changes in techniques and technologies of production with the change of technological orders [4].



Picture 2. S.Y. Glazev. Change of technological orders and common economic development. URL: http://eurasec.com/images/All%20Foto/Statyi_grafiki/glaz_ris6.jpg

The frame of the 6th technological order is forming now in some of the developed countries, first of all in the USA, Japan and Korea and is characterized by the use of “high technologies”. In Russia even the widening of the 5th technological order is an imitation. This happens on the basis of foreign resources and limits the opportunities to develop our own technological base [4]. The share of 5th order technologies is about 10% and it is only in the developed area of production: military production and air and space industry — as it was pointed out by academic RAS E.N. Kablov. More than 50% of technologies refer to the 4th order and almost 1/3 — to the 3rd order. Next 10 years we need to devote to the development of the 6th technological order and skip the 5th one [5].

Academic RAS S.Y. Glazev in his monograph “Strategy of the advanced development of Russia and the global crisis” (2010) explained the suggestions on modernization and advanced development of the Russian economy based on new technological order as a key element of the anti-crisis policy. The main problem for the Russian economy is the not adequate institutional structure that stops the development and reduces its capacity. “Existing structures, starting from the training system and ending up with the planning methods of the state scientific and technical policy, aimed at reproduction of the previous technological order and do not meet the requirements and abilities of the new kind of development” [4]. Perm Region is positive example of transition towards the 6th technological order, in my opinion.

Achievement of the 6th technological order is not the target for Russia. It is a question of survival, development of its economy, national security, and international status of the country and welfare of its people. “If we would not consider the will of some officials to keep the visibility of their importance, there were no obstacles on the way. Only a political will and some time are needed, of course” [5]. Unfortunately, the crisis 2014-2015 shows that there is only some time left for modernization and technological changes go on very slow. Russia is late with the establishment of the 6th technological order. Meanwhile, we are able to observe the origins of the 7th technological order based on cognitive technologies, when the human consciousness is the productive force like the science was [6].

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Partnership in the Arctic: searching for a new model of international cooperation in the era of global instability

Panel Discussion on January 15, 2015, Gaidar Forum, Moscow



© **Lukin, Yury F.** Doctor of Historical Science, Professor, Editor-in-chief of the journal "Arctic and North", Arkhangelsk

Abstract. The Gaidar Forum materials review aimed to clarify the situation with the searching for a new model of international partnership in the Arctic.

Keywords: *Arctic, policy, partnership, employment*

In the middle of January, the Russian Academy of the People's Economy and State Services under the President of the Russian Federation held

Gaidar Forum — international scientific and practical conference on economics that has attracted leading experts — politicians, scientists and businessmen. The second day of the Forum was the most important due to the 30 meetings of the leading Russian and foreign specialists in economics, politics and social services held that day. The Arctic issues were represented there for the first time. On the 15th of January the discussion "Partnership in the Arctic: searching for a new model of international cooperation in the era of global instability"¹ took place. New priorities of the state policy in the Arctic, the ecological security, perspectives for the resource use and extraction in the Arctic, the industrial balance and preserving the Arctic civilization were discussed there. Speaking at the Forum, A.N. Chilingarov pointed out a number of urgent problems for the Arctic.

The Yamal-Nenets Autonomous District's Governor Dmitry Kobilkin came out with the speech that the fundamental ideas for all the states represented in the Arctic were to establish the common rules and to use the resource extracting technologies rationally. New push for the development of the area, in his opinion, is the development of the infrastructure. The NSR, that includes not only the North of the Pacific Ocean but the North of Europe, would help the Yamal-Nenets Autonomous District to create 20 thousand jobs, — admitted the Governor. In his speech he also mentioned that it was necessary to change the model of using the Arctic resources from the resource model to the model focused on people.

Marina Kovtun, Governor of the Murmansk Region, is convinced that the Arctic regions need the state supports or "people will leave the North". The only motivation to stay in the Arctic

¹ URL: <http://www.akm.ru/rus/press-release/bd.htm?id=604>(Accessed:28.01.2015)

is to use its resources. The Governor admitted that the Federal authorities had to compensate Northerners the rise of the prices due to their hard economic situation.

Governor of the Arkhangelsk Region I.A. Orlov told the participant of the Forum about the regional experience of cooperation aimed at solving the problems specific to the Arctic. He pointed out that we were in need to combine the education, training and practice to solve the Arctic problems. Arkhangelsk has such experience: Northern (Arctic) Federal university and companies working in polar conditions and providing services for the resource extraction industry. Also, Igor Orlov mentioned the role of the Association of the Arctic municipalities, established in Arkhangelsk: it is aimed at solving various problems of ordinary people, who are living in the Polar areas.

In order to make the Arctic comfortable for living, it is necessary to have cheap prices for heating and to decide the problems of logistics and transport availability, — said Roman Kopin, Governor of the Chukotsky Autonomous District. We need to make amendments to the existing legislation. “500 legal acts regulate the relations of the Arctic regions. Only 6 of them are specially designed to solve concrete problems of indigenous rights”, — said the director of the Institute of law and comparative law under the Government of the RF Anatoly Kapustin ².

So, these were the key speeches of the Forum, reflected in the mass media and hardly could be called a discussion aimed at searching a new model of the intergovernmental cooperation at the age of global instability. Everyone was speaking about the most important problems he or she has been facing for a long time: living conditions in the Polar areas, local problems of the social and economic development of the land territories included in RFAZ. We could say that the governors just got a chance to speak out all they wanted on the Arctic conferences in 2014. Probably some issues had no reflection in the mass media.

Key meeting on the second day of the Forum was the discussion “Real sector of economy: way to efficiency”, related to the economy of the Arctic micro-region. The moderator, the Head of the Russian State Duma, Sergey Narishkin admitted that the crisis was one of the natural things for economy; the differences were only in the methods of the anti-crisis policy; the most important method was the support of the real sector of economy. According to Vladimir Yakunin, President of the JSC “Russian Railways”, the economic growth with the help of out sorting is hard now due to the number of methodological mistakes. “Russia can’t be critical for itself, but it can be politically correct. Under the influence of political correctness we often hide such things as inadequate behavior and absence of professionalism. The Ministry of Finance speaks about cutting the budget but it doesn’t clarify what to cut. If they will cut the financing support for the innovations and

² Ibid.

technological development, the crisis is going to be even harder”, — admitted the expert and said that in order to maintain the stability and progress there had to be some risk short-term investments ³. The Minister of the industry and trade of the Russian Federation Denis Manturov spoke about the transfer of technologies from the civil sector to DIC, but it was the opposite.

It might be interesting to say some words about the speech of a famous economist and sociologist Immanuel Wallerstein and his words about jobs. He shocked the economists at the Forum by visiting it the same way as the fall of the oil prices. Sociologist and Marxist looked unusual at the Mecca of the Russian liberals. At the Forum Immanuel Wallerstein said: “It seems to be too many discussions about the growth. I’m a radical dissident when it comes to the issues of growth. I think that *growth is not the most important indicator. For the majority of people, the only important indicator of the world economic development is the unemployment rate and the rate is too scary, because it is growing everywhere*. This tendency has been going up for the past 30 years and we are not precise in evaluating the unemployment. So, we do not count the not enough employment that has really horrible scales. We do not account people who do not work not because they don’t want to do it, but because they have no place to work. ...I think we are experiencing a period of high growth fluctuations, unpredictable changes. We see huge changes and the growth of unemployment everywhere. If countries would not recognize it, if they would not defend themselves from the growth of unemployment, the consequences had to be very hard, so now, what ever happened, unemployment, if we take in account the world average, does not decrease... Now we see the fastening fall of the US and I’m not expecting this tendency to change in opposite way ⁴.

In the interview on the 19th of January 2015 for “Lenta.ru” Wallerstein said that the growth of unemployment meant the fall of the demand able to be paid, a loss of income and damage for investments. Businessmen are in the situation, when it is not possible to predict what would happen to their investments. Investments are usually stopped and this makes the situation even worse, because it makes the unemployment grow. Answering the question about the unemployment in Russia, the famous scientist said that he did not trust the statistics. “It is not only the case of Russia but the other countries as well. It should be considered skeptically”⁵.

Issues of employment, new jobs, professional training, labor mobility, investments and the increase of the human capital are extremely important and relevant for all the Arctic 4 units of the

³ URL: <http://www.gaidarforum.ru/news/view/novosti/Adaptatsiya-goskompanij-k-slozhnym-ekonomicheskim-usloviyam/> (Accessed: 15.04.2015)

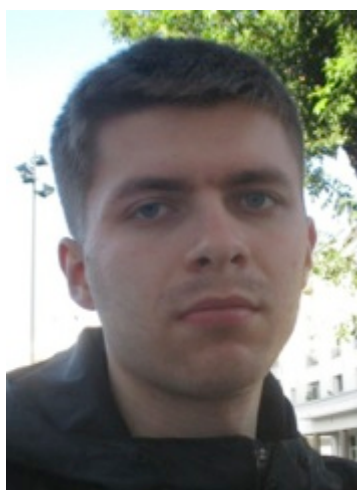
⁴ Immanuel Wallerstein. URL: <https://www.youtube.com/watch?v=IVy2VM6Jg7M> (Accessed: 28.01.2015)

⁵ Immanuel Wallerstein. URL: <http://lenta.ru/articles/2015/01/19/wallerstein/> (Accessed: 28.01.2015)

Russian Federation and 16 municipalities, included in the land areas of the RFAZ; for those, who works in the high latitudes and indigenous people of the Arctic. Also these issues are important for the partnership in the Arctic region.

Complex scientific research and cooperation in the Arctic: Interaction of universities with the academic and industrial research organizations

All-Russian Conference with international participation on 26—27 February 2015, Arkhangelsk



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Abstract. Review of the conference which took place at the Northern (Arctic) federal University (Arkhangelsk) in February 26—27 2015 and was dedicated to various questions of development of the Arctic. Some presentation are highlighted in the review, speaker’s suggestions included in final resolution are represented.

Key words: *conference, Arctic, cooperation, science, scientific research, university*

On the 26—27 of February 2015 at the Northern (Arctic) federal university named after M.V. Lomonosov there was held All-Russian conference with international participation “Interaction of universities with the academic and industrial research organizations”. This rather significant meeting was attended by 100 scientists from 14 towns who presented 85 reports (excluding the report at the general session).

The conference was opened by the Arkhangelsk regional Governor I.A. Orlov, who especially outlined the role of the region in the development of the Arctic; and the NArFU rector E.V. Kudryashova, who reminded about the Day of Arctic celebration on the last day of winter and told about the place of the NArFU in the scientific research of the Arctic, development of the NSR and North. Some telegrams from the leading scientists, including A.N. Chilingarov, were read out.

On the general session, V.A. Masloboev, deputy leader of the Kola Scientific Center of the RAS, told about their experience in cooperation with the universities in order to decide the Arctic issues. He also pointed out that the Murmansk Region could become the industrial platform for the development of the Arctic, but the present system of education does not fit the requirements of the Region. A half of the school graduates leave and does not come back. So, the stuff issue is extremely important for state aid regional development programs. Presentation of his report could be found in the 19th issue of the “Arctic and North” journal.

The Head of the NSMU Department for international cooperation Y. A. Sumarokov shared the experience he and the Medical University had in working for international scientific cooperation. The first agreement between the NSMU (ASMA) was signed in 1992 and since that time the scale of the international cooperation has been growing. It is a relevant question for the region now due to the fact that the interaction with the foreign partners contributes to the development of science. For example, the project aimed at prevention of the traumatism in the streets and roads or a new project on heat diseases in Russia.

The Head of the Department on the interaction between the ocean and atmosphere of the AANII G.V. Alekseev reported that there were different ideas about the future of the warming in the Arctic. In 2012 there was a minimal ice area in the Arctic. Advanced research showed that instead of increase of temperatures, it was expected the decrease by 2030-2040 and the increase of the ice in the Arctic.

NArFU rector's Assistant on scientific development K.G. Bogolicin, admitted a special relevance of information about the climate change and seismic situation for the development of the Arctic. We should develop theories and methods for monitoring, invent relevant types of equipment, organize stations and etc. NArFU is developing new methods of monitoring, due to the fact that old ones are not that good when it comes to the monitoring of a certain number of chemicals, especially small concentrated ones. IEPN UD RAS deals with the seismic monitoring issues.

The leading geologist of the Spitsbergen geological and searching group of the Fifth marine geological expedition V.V. Shavrin told about the results of their research, represented maps and prints. He also admitted the decrease in financing the research and its negative influence on the amount of researchers. This problem was partly decided by the students who come to practice.

Director of the Institute for Regional research and town planning of the HSE I.N. Ilina was speaking about the differences between different programs and approaches to the development of the Arctic. The strategies of the development lack practice, so they are no more than declarations of intentions. It is necessary to correlate these strategies with the modern methods of analysis, used by the Higher School of Economics in particular.

Section meetings were devoted to urgent problems:

Section 1. Interaction perspectives (problems) of science and universities in the complex research of the Arctic resources.

Section 2. Monitoring of the environment and climate change in the Arctic (climate measurements, forecasts, perspectives, industrial development of the Arctic territories and its

environmental effect). Section 2a (subsection). Soil and landscape studies in the Arctic (in memory of N.M. Sibirtsev).

Section 3. Transfer of scientific knowledge and new technologies of the Arctic development.

Section 4. Monitoring and forecasts of the social and economic landscape of the RFAZ.

Round table discussion “Strategic audit of the social and economic development of the Arctic and Russian national security” took place on the second day of the conference.

Each section prepared suggestions for the Final resolution. Developing the idea of integrating of science and higher education system, participants of the conference suggested creating a scientific and educational consortium aimed at the complex research of the Arctic and training specialists. The State Arctic Committee should form the expert councils on scientific assistance, as the majority of the representatives believe it’s necessary. The opinion to hold this type of conference annually and to cooperate closely was the leading one.

A list of concrete measures on the environmental and climate monitoring in the Arctic have been addressed the Roskosmos and Roshydromet. Soil and landscape research was suggested to be made during the expedition of the NArFU Arctic Floating University. Some suggestions were made on education, creating interdisciplinary master degree programs and providing the multidisciplinary training.

Participants of the section meeting “Transfer of scientific knowledge and new technologies of the Arctic development” supported the idea of Complex scientific program for the Arctic, which could be enforces by the joint activity of scientists and educational institutions (providing both training and research). Some activities aimed at providing the technologies and creating inter-university infrastructure for intellectual analysis in favor of the arctic development.

In order to provide economic growth and keeping the Northern territories inhabited, it seems to be relevant to make some amendments for the federal legislation:

1. Lower taxation, credits and other support for the business, NGOs and people of the North, including the RFAZ with a special attitude to the extreme living conditions, long distance from the supplying services and customers of the products made in the North and existing “northern delivery”.
2. State support of the use, modernization and construction of the transport, energy, housing and social infrastructure, including the NSR infrastructure and other projects.
3. Measures for bringing up the living standards and social cohesion of the Northerners.

Some suggestions for the State Committee on the Arctic development were formulated:

- a. Adoption of the fundamental federal law “On the Arctic zone of the Russian Federation”
- b. Monitoring and making an Open State list of all Russian islands in the Arctic Ocean; clarifying the responsibilities for departmental use of lands and waters in the Arctic.
- c. Development of the interregional integration of 4 units of the Russian Federation and 16 municipalities included in RFAZ. Creation of the united information space of the RFAZ, information network “Russian Arctic”, Arctic TV and radio. Development of the cross border cooperation. Interregional cooperation in creation of common tourist brands and projects in the RFAZ and the Russian tour operator.
- d. Creation of the Arctic project portfolio. Opening the office for Arctic projects under the NGO “Agency of strategic initiatives in promotion of the new projects” and work of such offices in Arkhangelsk (Western, European part of the RFAZ) and Yakutsk (Eastern, Asian part of the RFAZ).
- e. Working out the possibilities of establishing the Bank of Reconstruction and Development of the Arctic and Arctic State Commercial Bank.

It is possible to say that the conference was devoted to almost all relevant issues for the Russian Arctic: climate change, culture, science, international cooperation, forecasts, projects management and etc. So, the conference could be considered as a significant event for the Arctic studies. Editorial Board of the “Arctic and North” journal hopes that the suggestions sounded on the conference meetings and included in the Final Resolution would be accounted when making various strategies and plans for the development of the Russian Arctic both at the federal and regional level. The text of the Final Resolution is available at the NArFU website: http://narfu.ru/upload/medialibrary/b29/rezolyutsiya-konferentsiya-fevral-2015-_itog_.pdf. The program of the conference is published at: http://narfu.ru/aan/Encyclopedia_Arctic/programma-_itog.pdf. Presentations made by G.V. Alexeev, K.G. Bogolicin, L.N. Gorbatova, V.V. Didik, I.N. Iliina, A.A. Karankevich, E.V. Kudryashova, Y.F. Lukin, A.I. Tatarkin and V.V. Sharin can be found here: http://narfu.ru/aan/Encyclopedia_Arctic/ind.php Some articles are included in the 19th issue of the “Arctic and North” journal or expected to be published in the 20th issue.

Summary

Авторы, аннотации, ключевые слова

Authors, abstracts, keywords

Социологические науки. Политология. Экономические науки

Social Science. Political Science. Economics

Курилов О. Г. Первые лица Российской Арктики: «Теперь я понимаю, что мы прошли по лезвию бритвы»

Kurilov, Oleg G. Top officials of the Russian Arctic: «Now I understand that we have passed the razor's edge»

Аннотация. Публикуются ответы Олега Курилова на вопросы интервью с первыми лицами Российской Арктики. Глава Норильска делится своим опытом управленца по созданию комфортной городской среды в экстремальных условиях Севера, рассказывает о своих профессиональных достижениях в управлении муниципальным образованием, которое в соответствии с Указом Президента РФ «О сухопутных территориях Арктической зоны Российской Федерации» от 2 мая 2014 года №296 входит в состав АЗРФ. Важнейшей задачей О.Г. Курилов считает обеспечение в городе достойных условий проживания, тот уровень комфорта, качества жизни, к которому когда-то привыкли норильчане.

Ключевые слова: Олег Курилов, глава муниципального образования, Норильск, Российская Арктика, комфортная городская среда

Abstract. The article represents one of the interviews with top officials of the Russian Arctic. Oleg Kurilov, head of Norilsk City administration, shares his management experience in the field of creation of the comfortable urban environment in the extreme conditions of the North, talks about his professional achievements. In accordance with the Presidential Decree "On the land territory of the Arctic zone of the Russian Federation" dated May 2, 2014 № 296 Norilsk is considered as a part of the Russian Arctic. Kurilov O.G. believes that the most important task for him is providing the citizens with the decent living conditions, the certain level of comfort and quality of life the people of Norilsk have already accustomed to.

Keywords: Oleg Kurilov, head of the City administration, Norilsk, Russian Arctic, comfortable urban environment

Гмырин М.А. Первые лица Российской Арктики: «Ассоциация «Арктические муниципалитеты» — для защиты интересов населения»

Gmyrin, Mikhail A. Top officials of the Russian Arctic: «Association "Arctic Municipalities" defends the interests of the population»

Аннотация. Отвечая на вопросы интервью с первыми лицами Российской Арктики Михаил Гмырин сделал главный акцент на миссии и задачах Ассоциации арктических муниципалитетов. Муниципальное образование «Северодвинск» выступило одним из первых учредителей новой ассоциации в декабре 2014 года. Её создание будет способствовать интеграции муниципальных образований для решения вопросов устойчивого социально-экономического развития арктических территорий. В Северодвинске накоплен позитивный опыт реализации социальных

Abstracts. Responding to the questions of the interview with top officials of the Russian Arctic, Mikhail Gmyrin focused on the mission and objectives of the Association "Arctic Municipalities". Severodvinsk municipality was among the founders of the Association in December 2014. Its creation would help the integration of municipalities and contribute to the sustainable socio-economic development of the Arctic territories. Severodvinsk has positive experience of making social projects. Improvement of the quality of life and living conditions of northerners is one of the major

проектов. Улучшение качества жизни, жилищных условий северян — одна из главных задач, стоящих сегодня перед всеми арктическими муниципалитетами. Практическая деятельность Ассоциации «Арктические муниципалитеты» может стать одним из основных направлений в работе «Государственной комиссии по вопросам развития Арктики» во главе с О.Д. Рогозиным.

Ключевые слова: Михаил Гмырин, ассоциация «Арктические муниципалитеты», Северодвинск, социальные проекты

challenges currently facing all Arctic Municipalities. The work of the Association "Arctic Municipalities" may be of the main activities of the State Commission on Arctic chaired by Rogozin O.D.

Keywords: Mikhail Gmyrin, Association "Arctic Municipalities", Severodvinsk, social projects

Шумейко Е.А. Первые лица Российской Арктики: «Воркута — мой родной город. Жизнь в Арктике закалила меня»

Shumeyko, Evgeny A. Top officials of the Russian Arctic: "Vorkuta is my home town. Life in the Arctic has tempered me"

Аннотация. В рамках проекта «Первые лиц Российской Арктики», отвечая на вопросы интервью, Евгений Шумейко рассказывает о тех позитивных изменениях, которые происходят к его родном городе Воркуте, где он родился, работал шахтером, а сейчас возглавляет его администрацию. Вхождение в состав АЗРФ — новый арктический статус для Воркуты означает дальнейшее его развитие. Чтобы развиваться в сложившихся условиях, городское хозяйство нужно привести в соответствие с сегодняшними реалиями, то есть оптимизировать инфраструктуру. Миссия Воркуты в разработанной в 2014 году стратегии социально-экономического развития городского округа определена как стратегический форпост освоения Арктики на Европейском Севере России.

Ключевые слова: Евгений Шумейко, Воркута, моногород, стратегия, инфраструктура, жилищный фонд, традиции, общегородские праздники, бюджет

Abstract. Under the "Top officials of the Russian Arctic" project, Evgeny Shumeyko talks about the positive changes in his hometown Vorkuta, where he was born, worked as a miner, and now he is the leader of the Town administration. Official membership in the Russian Arctic zone gives a new status for Vorkuta and means its further development. In these circumstances, the urban economy should be brought into the light of reality, to optimize the infrastructure in order to have chances for the further development. «Strategy of socio-economic development of the urban districts 2014» defined the role of Vorkuta as a being a strategic outpost of Arctic exploration in the European North of Russia.

Keywords: Evgeny Shumeyko, Vorkuta, mono industrial town, strategy, infrastructure, housing fund, traditions, city holidays, budget

Зайков К.С. Проблема «арктической конкуренции» морских транспортных узлов: столкновение бизнес интересов или игра на выбывание?

Zajkov, Konstantin S. The «Arctic competition» problem and the marine transport hubs: Is it a clash of business interests or the knockout game?

Аннотация. Анализ причин и источников так называемой «арктической конкуренции» между Мурманском и Архангельском позволяет выявить сильные и слабые стороны, возможности и угрозы (SWOT-анализ) морских транспортных узлов. Актуализируется проблема интеграции транспортно-логистических процессов. Архангельский и Мурманский морские

Abstract. Analysis of the causes and sources of the so-called "Arctic competition" between Murmansk and Arkhangelsk identifies strengths and weaknesses, opportunities and threats (SWOT-analysis) of the marine transport hubs. The focus of the article is the transport integration problem and logistics. Arkhangelsk and Murmansk marine nodes were created as the part of a single freight logistics

транспортные узлы создавались как части единой логистической системы грузоперевозок на Севере и должны не конкурировать, а дополнять друг друга. Предлагается создание национального транспортно-логистического интегратора, с функциями надкорпоративного логистического центра, отвечающего за научно обоснованное, равномерное и прозрачное перераспределение грузопотоков и грузовых баз логистического рынка западной части Российской Арктики

Ключевые слова: Арктическая конкуренция, Архангельск, Мурманск, морской порт, речной порт, логистика, грузовые базы, сервис, транспортно-логистический узел

system in the North and were not supposed to compete, but to complement each other. Nearest future will bring up the issue of the national transport and logistics integrator with the functions of the "upper-corporative" logistics center responsible for evidence-based, homogeneous and transparent re-distribution of traffic and freight logistics market bases in the western part of the Russian Arctic.

Keywords: Arctic competition, Arkhangelsk, Murmansk, sea port, a river port, logistics, freight base, service, transport and logistics hub

Зиланов В.К. Дуги рыболовной напряжённости в Российской Арктике

Zilanov, Vyacheslav K. Fishing tension arcs in the Russian Arctic

Аннотация. В статье всесторонне рассматриваются сложившаяся ситуация, проблемы и возможные решения, связанные с рыболовством в арктическом пространстве. Изменения, происходящие в Арктике, несомненно затрагивают рыболовство. В связи с этим, анализируются «горячие точки» в экономической деятельности и международных отношениях — дуги рыболовного напряжения в АЗРФ, а также внутренние проблемы использования морских ресурсов.

Ключевые слова: Арктика, рыболовство, Баренцево море, дуги рыболовной напряжённости, Норвегия, Шпицберген, США, «ледовый мешок», морские ресурсы, суда

Abstract. The author of the article comprehensively examines the current situation, problems and possible solutions related to fishing in the Arctic. Changes in the Arctic will undoubtedly affect fisheries. In this regard, the author analyses the "hot spots" of economic activity and international relations — fishing tension arcs in the Russian Arctic, as well as the internal problems of the marine resource use.

Keywords: Arctic, fisheries, the Barents Sea, the fishing tension arc, Norway, Svalbard, the United States, "ice bag", marine resources, ships

Каторин И.В., Чураков А.А. Проблемы и перспективы развития арктических регионов (по материалам экспертного опроса)

Katorin, Igor V., Churakov, Andrey A. Arctic Regions' development problems and prospects (based on the expert survey)

Аннотация. В статье изложены результаты экспертного опроса в Архангельской, Мурманской области и Ненецком автономном округе. Акцент сделан на оценке арктической политики на федеральном уровне, оценке системы поддержки населения арктических регионов. Исследуются представления о межрегиональном сотрудничестве, о региональной арктической политике и перспективах регионов.

Ключевые слова: экспертный опрос, политика, арктические регионы, система поддержки населения, перспективы развития,

Abstract. The article presents the results of the survey made in Arkhangelsk, Murmansk regions and Nenets Autonomous District. The assessment of the Arctic policy at the federal level and the evaluation of the system of support of the population of the Arctic are in the focus of the article. The authors reflect on the inter-regional cooperation, the Arctic regional policies and prospects of the region.

Keywords: expert survey, politics, Arctic regions, the system of support of the population, prospects of development, inter-regional integration

Кокис К.А. К вопросу о формировании арктической политики РФ

Kokis, Kira A. Revisiting the question of the Russian Arctic policy making

Аннотация. В статье рассматриваются основные этапы и ключевые документы, выделившие Арктическую зону РФ в самостоятельный объект государственной политики. Анализируются актуальные проблемные моменты формирования арктической политики России. При анализе государственной политики было решено отказаться от выделения четких этапов ее формирования по причине того, что не представляется возможным определить равнозначные критерии для их разграничения. Избранный подход позволил достичь поставленной цели и сделать выводы о динамике процесса формирования арктической политики РФ, ее ключевых моментах, смысле и значении принимаемых правовых актов.

Ключевые слова: Арктическая зона Российской Федерации, государство, политика, ключевые события, основы, управление, стратегия, правовые акты

Abstract. The author discusses the main stages and key documents that have established the Russian Arctic zone as an independent object of the state policy and analyses current issues of the Russian Arctic policy making. It was decided to avoid the clear separation of stages in the policy making process due to the fact that it was not possible to determine the equivalent differentiation criteria. The chosen approach has allowed to achieve certain goals and to draw conclusions about the dynamics of the Russian Arctic policy making, its key points, the meaning and significance of adopted legal acts.

Keywords: Arctic zone of the Russian Federation, the state, politics, key events, fundamentals, management, strategy, legal acts

Маслобоев В.А. Опыт интеграции Кольского научного центра РАН с ВУЗами по решению комплексных задач устойчивого развития АЗРФ

Masloboev, Vladimir A. Experience of integration of the Kola Scientific Center of RAS with Universities in solving complex problems of sustainable development in the Russian Arctic

Аннотация. Социально-экономический контекст развития АЗРФ требует качественного инженерно-технического кадрового потенциала. Анализируются основные факторы определяющие ситуацию, проблемы и решения кадрового обеспечения реализации национальных интересов России в Арктике. Нужны специалисты, знакомые со спецификой использования теоретических знаний и практических навыков в условиях крайнего Севера, социально адаптированные к жизни в Заполярье. Необходим комплекс мер, нацеленных на популяризацию инженерного образования, с одной стороны, и удержание молодежи в регионе — с другой, модернизация существующей в регионе системы профессионального образования. Раскрывается позитивный опыт интеграции Кольского научного центра с вузами — базовые кафедры вузов в институтах КНЦ, научно-образовательные центры, региональный университетско-академический кластер высшего профессионального образования, инновационное партнёрство науки,

Abstract. Socio-economic circumstances in the Russian Arctic require high quality engineering and technical personnel. The article is focused on the analysis of the key factors that determine the situation, staffing problems and solutions of national interests of Russia in the Arctic. Specialists, able of the use theoretical knowledge and practical skills in the Far North, socially adapted to the life in the Arctic, are needed. A set of measures aimed at promoting the engineering education, on the one hand, and retention of young people in the region, on the other hand, and the modernization of existing regional system of vocational education are required. The article reveals positive experience of integration of the Kola Scientific Centre (KSC) with the universities — basic departments of the universities and the institutions of the KSC, scientific and educational centers, and regional university-academic cluster, innovative partnership of science, education, government and business. The article focuses on the continuity of environmental education aimed to maintain the sustainable

образования, власти и бизнеса. Сделан акцент на непрерывность экологического образования для устойчивого развития, начиная с детского сада, школы, вуза.

Ключевые слова: Кольский научный центр, инженерно-технический кадровый потенциал, интеграция вузов и НИИ, непрерывность экологического образования

development, starting from kindergartens and ending up with school and university education.

Keywords: Kola Scientific Centre, human resources for engineering, integration of universities and research institutions, the continuity of environmental education

Слепцов А. Н. Региональные аспекты развития Российской Арктики на примере Республики Саха (Якутия)

Sleptsov, Anatoly N. Russian Arctic regional development aspects: the Republic of Sakha (Yakutia)

Аннотация. В статье рассматриваются региональные аспекты развития Российской Арктики на примере Республики Саха (Якутия). Дано обоснование включения в состав Арктической зоны Российской Федерации 13 арктических и северных районов Якутии. В Республике Саха (Якутия) накоплен многолетний позитивный опыт правового регулирования развития арктических и северных улусов (районов) Якутии, который представляет интерес для правоприменительной практики в других субъектах АЗРФ. Анализируются вопросы социально-экономического развития Якутской Арктики, итоги проведенного в 2014 году Года Арктики. В заключении сформулированы конкретные рекомендации.

Ключевые слова: Арктическая зона Российской Федерации, Республика Саха (Якутия), социально-экономическое развитие, Якутская Арктика, республиканское законодательство, Год Арктики

Abstract: The article focuses on the regional development aspects of the Russian Arctic in case of the Republic of Sakha (Yakutia). The author explains the reason for the 13 Arctic and Northern territories of Yakutia to be legally considered as a part of the Russian Arctic. The Republic of Sakha (Yakutia) has accumulated a long term positive legal experience in regulating the development of the Arctic and Northern ulus (districts) of Yakutia, which is of interest for the law community in other territories of the Russian Arctic. The author analyzes the issues of socio-economic development of the Yakut part of the Arctic and the results of the Year of the Arctic 2014. In conclusion some specific recommendations on development of the Arctic territories are to be found.

Keywords: Arctic zone of the Russian Federation, the Republic of Sakha (Yakutia), the socio-economic development, Yakut Arctic Republican legislation, Year of the Arctic

Сушко О.П. Проблемы экономического и экологического баланса в развитии северной лесной индустрии приарктических стран

Sushko, Olga P. Economic and ecological balance and the development of the forest product industry in Arctic countries

Аннотация. Нестабильность производства, снижение экспортной доли в общемировом товарном обороте показывает нарастание проблем в лесопромышленной отрасли северных стран. Представлен ретроспективный анализ развития северной лесной индустрии приарктических стран: Норвегии, Финляндии, Швеции, Канады, Дании. Полученные результаты позволяют определить основные экономико-экологические проблемы северной лесной индустрии и перспективы её развития

Ключевые слова: северная лесная индустрия, экспортная доля, объёмы производства

Abstract. Instability of production and the decline of the export share in the world commodity turnover show increasing problems in the forest industry of Nordic countries. The article represents the retrospective analysis of the Northern forest industry development in Norway, Finland, Sweden, Canada and Denmark. The obtained results give us an opportunity to identify the main economic and environmental problems of the Northern forest industry and its development prospects.

Keywords: Northern forest industry, the export share, timber production volumes

лесопромышленной продукции

Цветков А.Ю. Мониторинг внутренних и внешних факторов стратегического развития территории Соловецкого архипелага: формирование «факторной сети»

Tsvetkov, Alexander Y. Monitoring of internal and external factors of strategic development of the Solovetsky archipelago: working out a “factor’s network”

Аннотация. В статье представлены рекомендации по мониторингу факторов внутренней и внешней среды управления территорией Соловецкого архипелага, изучены методы анализа факторов среды в рамках маркетингового подхода к стратегическому управлению территориями; обосновано понятие «факторной сети» как сложной системы взаимосвязей между факторами; показано место и роль подсистемы мониторинга факторов среды в системе стратегического управления территориями; подчёркивается необходимость аналитической работы при разработке стратегии развития территории.

Ключевые слова: Соловецкий архипелаг, мониторинг, внутренние и внешние факторы, методы анализа факторов среды, маркетинг территорий, стратегическое управление, «факторная сеть»

Abstract. The article contains recommendations on monitoring the internal and external factors of strategic development of the Solovetsky archipelago and studies the methods of environmental factors analysis in the strategic territory marketing. The author defines the concept of “factor’s network” and considers it as a complex system of interactions between factors. The role and contribution of the factor’s monitoring subsystem in the strategic management system is discussed as well as the necessity of the analytical work for the process of a territory strategic development.

Keywords: the Solovetsky archipelago, monitoring, internal and external factors, methods of environmental factors analysis, territory marketing, strategic management, “factor’s network”

Исторические науки. Historical Science

Паникар М.М. Использование труда советских военнопленных в Норвегии в годы Второй мировой войны

Panikar, Marina M. The employment of the Soviet prisoners of war in Norway during the Second World War

Аннотация. Статья, написанная, преимущественно, на базе иностранных и отечественных архивных источников, посвящена изучению основных сфер трудового использования советских военнопленных в нацистских лагерях, расположенных на территории оккупированной Норвегии, в годы Второй мировой войны.

Ключевые слова. Вторая мировая война, Норвегия, советские военнопленные, лагеря для военнопленных, использование труда военнопленных

Abstract. The article, based on the foreign and Russian archives, is devoted to the study of employment of the Soviet prisoners of war in Nazi POW camps on the territory of Norway during the Second World War.

Keywords: the Second World War, Norway, Soviet prisoners of war, POW camps, the employment of POW

Обзоры. Reviews

Лукин Ю.Ф. Пермский инженерно-промышленный форум

Lukin, Yury F. Perm Engineering and Industrial Forum

Аннотация. Обзор материалов Пермского

Abstract. The article represents the review of

инженерно-промышленного форума, который прошел 6—7 ноября 2014 года в Перми. Это проект федерального масштаба, в рамках которого прошли десятки круглых столов и семинаров, посвященных будущему отечественной промышленности. Обсуждаемые на форуме проблемы и решения имеют самое непосредственное отношение к новой индустриализации Российской Арктики и Севера, переходу к шестому технологическому укладу.

Ключевые слова: Пермский край, экономика, инженеры, кластеры, рабочие места, шестой технологический уклад, новая индустриализация

materials of the Perm Engineering and Industry Forum held on the 6th-7th of November 2014 in Perm. The Forum represented a project of the federal scale, under which dozens of round tables and seminars on the future of the Russian industry were held. The issues discussed at the Forum and the Resolution are correlated with the new industrialization of the Russian Arctic and the North and with the sixth technological order transition period.

Keywords: Perm, economics, engineers, clusters, jobs, the sixth technological order, new industrialization

Лукин Ю.Ф. Партнёрство в Арктике: в поисках новой модели межгосударственного сотрудничества в эпоху глобальной нестабильности.

Lukin, Yury F. Partnership in the Arctic: searching of a new model of international cooperation in the era of global instability

Аннотация. Обзор материалов Гайдаровского форума, касающихся поисков новой модели межгосударственного партнерства в Арктике.

Ключевые слова: Арктика, политика, партнёрство, рабочие места

Abstract. The Gaidar Forum materials review aimed to clarify the situation with the searching for a new model of international partnership in the Arctic.

Keywords: Arctic, policy, partnership, employment

Шепелев Е.А. Комплексные научные исследования и сотрудничество в Арктике: взаимодействие вузов с академическими и отраслевыми научными организациями.

Shepelev, Evgeny A. Complex scientific research and cooperation in the Arctic: the interaction of universities with academic and industrial research organizations

Аннотация. Дан обзор конференции, прошедшей 26—27 февраля 2015 года на базе Северного (Арктического) федерального университета (г. Архангельск) и целиком посвящённой различным вопросам освоения Арктики. В рамках обзора освещены некоторые выступления, приведены предложения от докладчиков, вошедшие в итоговую резолюцию конференции.

Ключевые слова: конференция, Арктика, сотрудничество, наука, научные исследования, вуз

Abstract. Review of the conference which took place at the Northern (Arctic) federal University (Arkhangelsk) in February 26-27 2015 and was dedicated to various questions of development of the Arctic. Some presentation are highlighted in the review, speaker's suggestions included in final resolution are represented.

Keywords: conference, Arctic, cooperation, science, scientific research, university

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Editorial Board: URL: <http://narfu.ru/aan/DOCS/redsovet.php>

Выходные данные / Output data

ARCTIC and NORTH

Multidisciplinary internet scientific journal

2015. N 19

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Signed for placement on the webpage: <http://narfu.ru/aan> on 15.06.2015