

DEVELOPMENT OF ARCTIC TRANSPORTATION IN RUSSIA

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The Arctic - is the most northern region of the earth. Water surface in the Arctic is shared between the Arctic Ocean and 10 adjacent seas, six of which wash the northern coast of Russia. So far, the navigation through the Arctic has been hampered due to the prolonged freezing, but global warming may significantly change this situation. This route is considerably shorter than the other transport corridors, and can significantly reduce the cost of transporting goods. The role of the Northern Sea Route persists on several objective reasons: geopolitical, political, geo-economic and economic. That is why the time has come to adopt a federal law on "the Northern Sea Route" and create the proper administration.

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Transportation of goods in the Arctic Soviet sector through the Northern Sea Route (NSR) had reached their maximum by the mid – 1980's. There were mainly coasting transportations of national cargoes and sometimes export – import operations, such as import of tubes to the Gulf of Ob the long-distance gas pipeline construction. These operations also included the timber export from Igarka and Tiksi. Foreign charterers transit cargo transportations through NSR between foreign ports weren't realized due to their economic uselessness or lack of demand. The real economics was also against the switching of cargoes to the sea routes in the field of coasting transit, for example Arkhangelsk – Magadan (Petropavlovsk-Kamchatskiy). The competition between sea

fleet and railroad transportation of the European part of the USSR and Primorsky Region was excluded. The fast reduce of sea arctic shipment value and the transmission of the transport to the private companies led to the decreasing of orders for the strengthened ice class vessels construction. The necessity of the open sea breakers refill was also under discussion. The interest of the international society towards the Arctic problems ha increased due to the further mineral resources extraction (mainly hydrocarbon) in the sea shelf of the Northern Sea Routes and the Barents (Barentsevo) Sea. If the strategic projects of the Russia's presence in the Arctic aren't created and realized, the foreign investments and companies will take an active part in the delf of the high-latitude deposits, and the future generations will have only their ancestors' memoirs about the heroic past of the Arctic development.

The Arctic is in the North of the Earth. It includes not only the Arctic Ocean, the northernmost tips of America and Eurasia but also islands and archipelagos. The center of the Arctic is the North Pole.

The total square of the Arctic is 26400 thousands sq.km. Seas have 18600 thousands sq.km, the rest part is for continents and islands. Water surface is divided between ten seas: Barentsevo Sea, White Sea, Kara Sea, Laptev Sea, East Siberian Sea, Chuckchee Sea, Beaufort Sea, Linkoln Sea, Greenland Sea and Norway Sea.

Six seas of the first above mentioned wash the north seacoast of Russia. The Northern Sea Route was opened here in the mid of 1930's and became the result of the Russia's edges age-old development.

Today this Route is an international transport corridor and the only inter-regional way to import the cargo in the Arctic regions of the Russian Thule. The NSR is also the main point for cultural exchange of the Arctic regions people and it plays an important role in the development and integration of economics.

But nowadays the construction of key main lines and transport hubs is falling behind, and transport meanings of all kinds of transport are out of fashion. The problems also exist with the aviation. The Arctic transport system of the Northern Sea Route is lagging from the modern level.

The Northern Sea Route has been providing the cargo transportation to develop the Russia's Arctic Zone; it also has been providing the cargo export from Europe to Japan and vice versa; it has been serving

some industrial zones of the USSR, where there was an extraction of rare metals, metals of value and hydrocarbon. But the economic reforms of the 1990's have broken this transport system, and the volume of freight traffic by NSR has decreased to the minimum. Russia opened the NSR for foreign piloting in 1991, and the non-profit organization on the coordination in the usage of NSR was created in 2001. This organization includes 33 companies.

There were some problems with the navigation around the Arctic till nowadays due to the long ice cover, but the climate warming can change this situation. Some scientists are sure that in 40 – 50 years the navigation by the NSR will be year round, and the others think that the navigation will be possible without ice channeling by 2020 – 2025. This route is considered to be shorter the other transport corridors, and it allows to reduce the expenses for cargo transportations. For example, the distance from Vladivostok to Saint-Petersburg by the NSR is 14.28 thousands km, by the Suez Channel it is 23.2 thousands km, and around the Cape of Good Hope it is 29.4 thousands km. It means that the necessity of the NSR can increase very fast.

But unfortunately the volume of the previous transportations by the NSR hasn't been recovered. It had reduced from 6.6 million tons to 1.5 million tons since 1987 to 1999. But this volume is planned to be increased to 50 million tones by 2020.

The volume of liquefied gas the Yamal and gas condensate from Ob regions transportations from will increase. The volumes of mineral fertilizers, nickel and timber transportation will also increase. The transportation of cars and machines will also increase as a result of the North mineral resources development. Of course, the huge investment is necessary for this.

There are some objective reasons for the increasing role of NSR:

1. Geopolitical – the ports of the Black and Baltic Seas are “closed”, because it is necessary to cross the Bosphorus Strait in the first case, and in the second it's necessary to cross the Kilsk and Denmark Straits.
2. Political. The Connection between the RF European part and the Far East isn't very stable, and it can cause different negative tendencies. The many cargo types transportations have become unprofitable due to the increasing of railroad tariffs.

3. Geo-economic. The trade is one of the high developed spheres of the international activity. It has been developing for 1.5 times faster than industrial production for the past decade. The sea transport provides 50% of all world transportations, but in the RF this index is only 30%.

4. The connection between the European and eastern parts of the country can be more profitable and stable thank for the Northern Sea Route. Of course, if the necessary volumes of transportation exist.

It is necessary to develop and recover the Northern Sea Route because of its importance for the Russian economy. This importance is determined by its economic and political meaning, which is connected with the development of northern parts of the country, and also the NSR will play a great role of the transnational sea transport route.

Nowadays the northern regions of the country are the only straight exits to the Atlantic part of the World Ocean. They are Murmansk, Arkhangelsk, and Kandalaksha sea ports. They are very important because they can receive heavy-tonnage vessels, and their offshore zone is open if to compare them with the Baltic and White Seas. The northern regions of the RF get more importance in connection with the development of global economic cooperation, which can lead to the increasing in importance of the NSR. The economic globalization promotes the creation of new intercontinental route between Europe and Asia. This route is the shortest in the Northern Hemisphere between the Pacific and Atlantic regions of the Earth and from the North – the West of Canada and Alaska to North Europe. The realization of this merchant project in the Arctic can lead to the strengthening of national and economic security in our country in the 21st century.

The Northern Sea Route is usually determined as a group of navigational ways which lie from the Novaya Zemlya to the Bering Strait. It's just a geographical description. But the NSR can be considered as both a group of navigational ways and a group of all the elements of the sea arctic transport system, which includes the coastal infrastructure, providing the work of the NSR. This definition is more suitable for the modern situation. The importance of the NSR is defined by the needs in the development of adjacent areas. The equipment of the route with ice-breakers and ice-braking transport vessels allows performing the arctic transportation in the summer-spring period of time along the

route. And the year-round transportation can be performed to Dudinka. The economic crisis of the 1990's has badly influenced on the cargo transportation along the NSR.

The main factors of the decreasing were: the decreasing in production at the Norilsk ore-dressing and processing enterprise, the decreasing of timber export from the arctic ports, the termination of foreign shippers cargo transportations, the decrease in volumes of the northern import in the regions of the Thule.

The stimulus for the development of the navigation in the eastern sector of the NSR is the increasing of transit transportation volume by means of the export of iron, mineral fertilizers, and the products of timber processing in the basins of Enisei and Lena to the countries of the Asian-Pacific region. And also the NSR can be used for the international navigation and integration in the world transport system.

The worst situation in the NSR is condition of ice-breaking and arctic transport fleet and also northern Russian ports. Today 7 nuclear and 4 diesel ice-breakers which belong to the company "Atomflot" are working in this region. It isn't enough, and the putting into operation of the modern ice-breaker is planned for 2015, and by 2020 the will three of them.

The foreign shipper can speed up the cargo delivery for 15 days and economize \$500,000 per every voyage using the Northern Sea Route. The domestic ice-breakers will get \$100,000. But foreign shippers don't hurry with this route because of perils. Also the insurance companies don't want to make contracts with those who wish to use this Northern route. The navigation equipment of the NSR is degrading. The realization of the program "Modernization of the transport system in Russia 2002 – 2008" hasn't helped in this situation. The status of the NSR is different in the country. Russia considers it to be its own transport communication, the USA, Canada and Scandinavian Countries offer to internationalize the NSR. In this case Russia will be dropped out of the governance and realization of tariff policy.

The USA Commission on the Arctic studies reported in 2002 the contradictions about the Northern Sea Route had become an important issue in the Russian-American relations. The USA insists the ice-covered straits of the NSR are international and is part of the transit transportation.

The Crosspolar air bridge also lays across the territory of the RF. This bridge is the shortest way between North America and Asia; it also has the shortest airways “North-South”, connecting the USA and Canada with the countries of the South-Eastern Asia, as well as China through Yakutia. The development of air transportation across the Arctic can transform Russia in one of the leading international transportation operators

The efficiency of the NSR will depend on the development of transport services market. Its goal is to reduce transport expenses, to increase the reliability of import, to modernize the transport meanings, to support manufacturers and shippers. The participation of freight owners in this business is provided by the appropriate level of transport tariffs. The participants of foreign freight owners are defined by the agreements of the production division, where the Russian shippers have the preference right. The development of the NSR can be achieved with the creation and implementation of the common transport system in the Arctic zone of the RF, which provides the optimal scheme for cargo delivery, forwarding agents activity development, antitrust measures and so on.

These problems define the necessity in the scientific studies of development in the strategy of the Arctic exploration. The NSR development complex project realization defines the necessity to achieve optimal decisions in the transport and social system Of the Thule and NSR operation. For the achieving of the goals it is necessary to implement the real sources, new suggestions, outworked projects and programs.

It is also necessary to study problems in forming of the Arctic cargo flow, transport services market development and the perspectives of NSR usage on the profitable basis, which can provide its self-sufficiency.

One of the important areas of focus is also the study of the NSR integration in the world transport system problems. It is also important to study the basis for the state regulations of business activity in correlation with military sphere.

The NSR is the most important part of the Thule economic complex, which connects the far-eastern and western regions of the country. And this is the intercontinental transport transit corridor in the system of international corridors such as Barentsev and Euro-Asian.

That is why nowadays it is necessary to organize investment, tariff, tax, custom and insurance policies to create at the NSR the economic ef-

fective conditions for realization the profitable transportation, including international. And also it is important to develop the NSR infrastructure and increase the cargo turnover. The elastic rate of tariff depending on the work season, distance, type of transported cargo , used transportation meaning is supposed to exist. To provide the competitiveness of the NSR it is offered to reduce the tariffs for the services payment if the transit and import-export cargo is transported by the NSR.

The State must realize that the Northern Sea Route today is not only the economic, but also the geopolitical question. This is the only real basis to keep the Russian territorial positions in the Arctic. It must take for itself the financing and modernization of transport fleet and ports. Nuclear ice-breaking fleet will still be in the property of the State.

We offer the following concepts in development and creation of the North zone transport complex:

- realization of the RF North transport zoning;
- estimation of main perspective transportation flow in the northern regions, including the area of the Northern Sea Route;
- analysis and estimation of transport communications, serving these flows, possibilities;
- modern and perspective estimation of the transport manufacture, producing the equipment for the North development;
- organizational and technical rationalization of the Russian Northern regions transport system management.

To realize the federal policy it is necessary to choose a special solution of the problems in the Arctic zone. This solution must be defined by the necessity to acknowledge the Arctic zone and the territory of the Thule and territories with a special status as needy in the process regulation on the basis of the state protectionism principle.

It is necessary to realize the state measures to confirm the legal status of the Russian Federation for the mineral and energy resources of the Arctic continental shelf. It is also necessary to create and realize the laws on the legal activity in the Arctic zone, laws which can provide the business and defense activity.

All the above mentioned measures are to provide the strategic way to reorganize the existed system of the Northern Sea Route management and its development for an effective functioning.

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