

1 Sustainable Transport in the Barents Region – STBR

Sustainable Transport in the Barents Region – STBR area comprises the northern counties of Sweden (Norrbotten and Västerbotten), Finland (Lapland, Kainuu and Oulu Region), Norway (Finnmark, Troms and Nordland) as well as the Northwest Russia (Murmansk, Karelia and Archangelsk). The objective of the STBR process was to create jointly a strategy for transport sector by addressing all the modes of transport (road, rail, air and sea) and bringing them into an intermodal transport system encompassing the entire Barents Region.

STBR started with its first phase spanning over the years 2003–2005 and the second phase continued over the years 2006–2007.

STBR phase I was financed by 25 regional and national authorities in Finland, Sweden and Norway together with the European Union Regional Development Fund within the Baltic Sea Region Interreg IIIB Neighbourhood Programme.

STBR phase II was jointly funded by Baltic Sea Region Interreg IIIB Neighbourhood and Tacis programs and 26 project partners from Finland, Sweden, Norway and North-West Russia.

County Administrative Board of Norrbotten was the lead partner of STBR process. Other partners were

- County Administrative Board of Västerbotten, Sweden
- Regional Council of Lapland, Finland
- Council of Oulu Region, Finland
- Joint Authority of Kainuu Region Office, Finland
- Finnmark County Authority, Norway
- Nordland County Council, Norway
- County of Troms, Norway
- Archangelsk Regional Administration, Russia
- Murmansk Regional Administration, Russia
- Republic of Karelia, Ministry of Economics, Russia
- Swedish Ministry of Industry, Employment and Communications, and Ministry of Foreign Affairs
- Finnish Ministry of Transport and Communications, and Ministry of Foreign Affairs
- Norwegian Ministry of Transport and Communications
- Swedish National Rail, Northern Region
- Finnish Rail Administration
- Norwegian Railway Administration
- Swedish Road Administration, Northern Region
- Finnish Road Administration, Oulu District
- Finnish Road Administration, Lappi District
- Norwegian Public Roads Administration, Region North
- Port of Luleå, Sweden
- Port of Oulu Finland
- Port of Narvik Norway
- Norwegian National Coastal Administration, Nordland
- Norwegian National Coastal Administration, Troms and Finnmark

2 Transport Strategy of the Barents Region

Transport Strategy of the Barents Region is mainly a summary of the results of STBR phase I and II. In addition a draft Transport Strategy for the North-West Federal District of Russia and some other strategies were also examined. The transport strategy aims at achieving a common vision of the region's transport system in the foreseeable future.

3 Implementing the transport system and developing the cooperation

3.1 Future cooperation

Transport cooperation in the Barents region will be strengthened. Special notice will be on strengthening the cooperation between the Nordic countries and the Russian North-West Association, and implementing the best practices. Also the cooperation and coordination with the other projects and initiatives will be strengthened. Common transport system of the Barents region will be produced in cooperation.

By promoting together the whole Barents region, special characteristics of the region are better taking into consideration in national and EU level. New alternative ways to finance planning and development of the infrastructure are searched together. Also transport statistics and data collection will be harmonized, and exchange of the data and information will be made easier.

3.2 Model for following up the promotion and implementation of the cooperation measures

A task force will be established, which will take the responsibility of preparing the ways and means of the future transport cooperation in the Barents region. Future cooperation will concentrate on more concrete projects and implementation of the best practices.

One possible alternative would be to establish forums to develop each transport mode, and create an umbrella, Barents Transport Forum, over all the transport modes to coordinate the whole transport system of the Barents region.

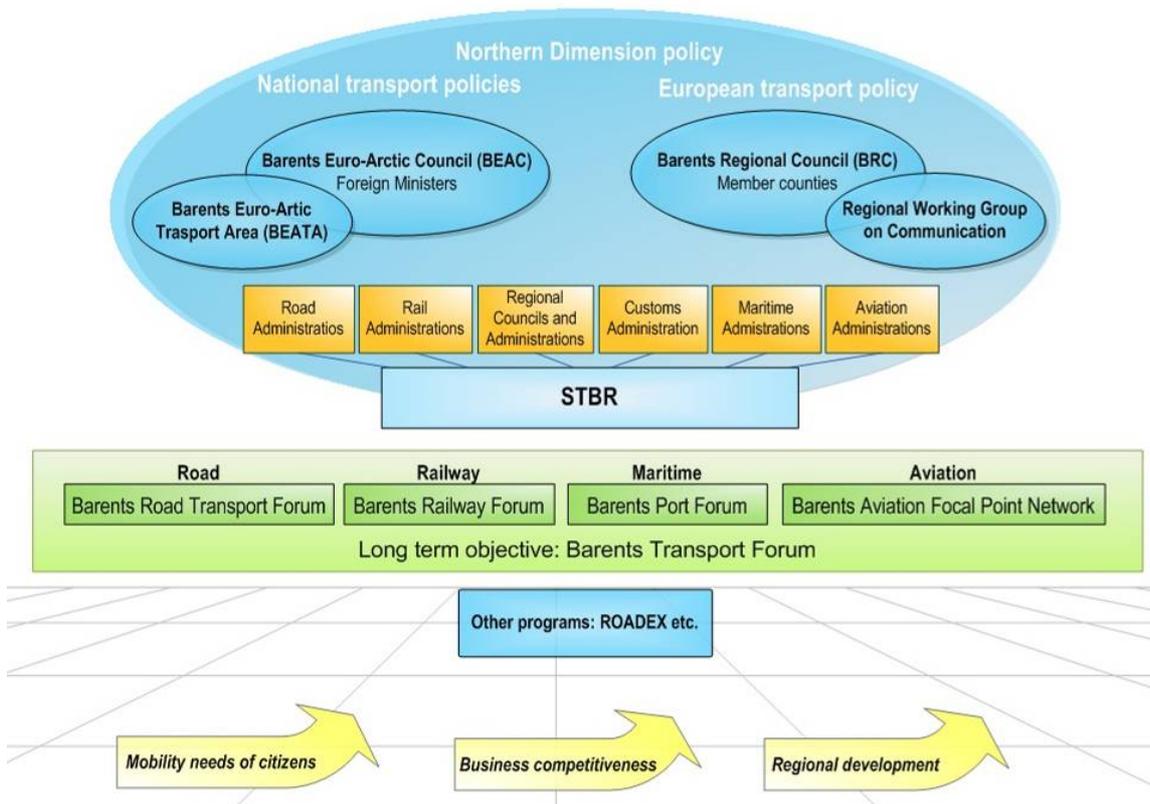


Figure 1. Tentative proposal for the model of transport cooperation in the Barents region.

Ways and means of the cooperation will be changed along with the needs at each time. However, it is important to create a permanent way of cooperation, because projects like STBR have limited life time. Most important objectives of the future cooperation are to strength the multi-national cooperation network, promote the Barents region in national and international level, and implement recommendations from STBR phase I and II, which are presented in chapter 4.

4 Recommendations for Authorities and Decision Makers

4.1 General Development

Regional councils and administrations must continue strengthening transport cooperation in the Barents region. In particular, they have to define the main international transport corridors in cooperation with other authorities and stakeholders. They also represent Barents region in the national level.

Policy	Main Projects
<ol style="list-style-type: none"> 1. Develop effective ways for transport cooperation in the Barents region 2. Define objectives for the development of the regional infrastructure 3. Create the Transport Policy of the Barents region 4. Identify and prioritise the most important horizontal and vertical transport corridors of international importance 5. Identify methods of financing and lobby them 6. Coordinate the projects and initiatives related to the transport corridors 7. Incorporate transport corridors in the regional land use plans, and national transport development programmes and plans 	<ul style="list-style-type: none"> ▫ Norther Axis / N.E.W. Multimodal Corridor: Narvik-Haparanda -Tornio-Vartius-St. Petersburg; the corridor connects the EU with Norway and Russia in the Barents region. Furthermore, it is part of a longer transport corridor between Asia and northern America ▫ Motorway of the Baltic Sea: One of the Motorways of the Seas which Commission proposed. Corridor will enable to develop transport chains based on sea transport more competitive. ▫ Northern Maritime Corridor (Northeast Passage): Corridor connects North-West Russia and northern Norway to the North Sea ports of the EU and Asia. ▫ Salla Corridor: Northern Norway and Sweden-Tornio-Salla-Kantalahti-Murmansk; the corridor enables the linkage of northern Europe and the Murmansk region. ▫ Bothnian Corridor: Stockholm-Haparanda-Tornio-Helsinki; the corridor connects the Barents region to the capitals of Finland, Sweden and Norway. ▫ Barents Link: Narvik-Haaparanta-Tornio-Vartius-Archangelsk –Perm; the corridor connects Nordic countries with the North-West Russian regions of Karelia, Archangelsk, Komi and eventually Perm.

4.2 Railways

National rail authorities must improve the rail transport, particularly cross-border traffic.

Policy	Main Projects
<ol style="list-style-type: none"> 1. Develop the international rail transport cooperation 2. Develop the railway and terminal infrastructure which supports the main transport corridors 3. Improve the conditions of cross-border traffic at borders 4. Develop the terminal performance and feeder traffic 	<p>Short term</p> <ul style="list-style-type: none"> ▫ Form a cooperation forum to develop rail transport in the Barents region ▫ Open all existing railway sections to the international transport ▫ Improve the availability of wagons especially in Russia ▫ Develop all important terminals ▫ Simplify the tariff system in Russia <p>Long term</p> <ul style="list-style-type: none"> ▫ Build missing railway connections to increase the competitiveness of rail transport ▫ Increase the bearing capacity of tracks ▫ Maintain also low volume railway sections in a reasonable condition ▫ Develop also smaller terminals ▫ Obtain wagons and locomotives suitable for different gauges ▫ Improve the multipurpose use of the wagons

4.3 Regional Aviation

Aviation authorities, airports and airlines should develop air traffic in cooperation with the regional administrations.

Policy	Main Projects
<ol style="list-style-type: none"> 1. Create a cooperation framework for regional aviation 2. Support existing and new flight connections, as well as marketing and promotion of the air service 3. Develop financing systems for air transport 4. Improve airports and their infrastructure 	<p>Short term</p> <ul style="list-style-type: none"> ▫ Establish the Barents Aviation Focal Point Network ▫ Maintain the existing flight connections <ul style="list-style-type: none"> - Luleå-Kiruna-Tromsø - Archangelsk-Murmansk-Tromsø - Kirkenes-Murmansk ▫ Develop the transverse flight connections, such as: <ul style="list-style-type: none"> - Luleå - Oulu/ Rovaniemi - Murmansk ▫ Support marketing and promotion activities, and information systems ▫ Improve the feeder transport and develop travel chains based on current flight connections ▫ Identify the needs for the subsidies, e.g. reduced landing fees ▫ Eliminate the legal and regulatory obstacles <p>Long term</p> <ul style="list-style-type: none"> ▫ Improve the airports especially in Russia ▫ Develop seasonal airports for year-round operation ▫ Develop the airports that are suitable for small airplanes ▫ Develop direct flight connections between main destinations in the Barents region and the rest of Europe/Russia

4.4 Maritime Transport

National maritime administrations are responsible for safety at sea, maintenance of the fairways, ice-breaking, pilotage, as well as regulations and development of the sea transport in national and international waters.

Policy	Main Projects
1. Strengthen the cooperation among the Barents ports 2. Develop ports and their inter-modality 3. Create a cooperation framework for the entire maritime sector	<p>Short term</p> <ul style="list-style-type: none"> ▫ Set up the Barents Port Forum (BaPF) ▫ Develop the ports, terminals and land connections with the transport corridors ▫ Develop transport connections related to Shtomanovskoye gas field ▫ Develop and harmonize the port statistics <p>Long term</p> <ul style="list-style-type: none"> ▫ Establish a Barents Port Association ▫ Adapt new technologies to improve performance in ports and develop transport chains between them ▫ Improve goods management in the ports ▫ Improve inter-modality of transport ▫ Increase cooperation in icebreaking and tugging ▫ Set up an information system of the sea transport

4.5 Road Transport

Road administrations are in charge with maintenance, traffic safety and development of the national/regional road network.

Policy	Main Projects
<ol style="list-style-type: none"> 1. Continue and strengthen the existing cooperation 2. Improve road infrastructure of the main transport corridors 3. Improve traffic safety, particularly that of heavy vehicles 4. Develop the conditions and safety of passenger traffic 5. Improve the exchange, availability and collection of road data and information 	<p>Short term</p> <ul style="list-style-type: none"> ▫ Establish the Barents Road Transport Forum and form subgroups for different tasks ▫ Improve the road connections in poor condition, especially in Russia and between Russia and Nordic countries ▫ Research, develop and implement new technologies in maintenance and road management through partnerships and pilot projects ▫ Continue the coordinated traffic safety work in the Barents region ▫ Develop and increase the traffic information and real-time mobile service solutions (about road conditions, tourism, traffic volumes, speed limits, road side services, weather conditions, border-crossing and border formalities) <p>Long term</p> <ul style="list-style-type: none"> ▫ Create fluent, homogenous and safe road connections to the main travel destinations of the Barents region around the year ▫ Develop the coordination and cooperation between road and other authorities ▫ Set up a joint data collection and statistical cooperation between the parties

4.6 Border Crossing

Formalities at the Barents borders should be developed in cooperation with the national customs and border authorities. The focus of cooperation must be on harmonizing the regulations, and speeding up the procedures at borders between the EU and Russia.

Policy	Main Projects
<ol style="list-style-type: none"> 1. Strengthen cooperation among border authorities 2. Harmonize legislation, regulations and procedures 3. Improve border facilities 4. Provision of educated and adequate staff at border stations 	<p>Short term</p> <ul style="list-style-type: none"> ▫ Decrease the number of the formalities at borders ▫ Introduce modern technology at the border stations ▫ Extend opening hours at border stations ▫ Increase information related to crossing the international borders

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- Cooperation for Sea Transport in Bothnian Bay (2007)
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- STBR II: Traffic Safety of Heavy Vehicles in Winter Time in the Barents Region (2007)
- STBR I: Passenger and Freight Flows in the Barents Region (1/2004)
- STBR I: Road Transport Corridors Study: Future Trends (15/2005)

Appendix 1: Background of the Transport Cooperation in the Barents Region

Background of the transport cooperation

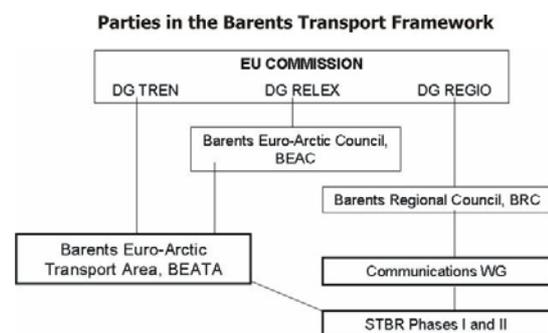
Northern Finland, Norway and Sweden, as well as the Murmansk and Archangelsk Oblasts (including Nenets), the Republic of Karelia and the Republic of Komi (i.e. the Barents Region) has rich natural resources and diversified economic structure, but is highly peripheral. The region's population and economic activities are located in a few central areas, which are wide apart and poorly connected with each other. Furthermore, the region is historically divided by national borders, which continue to support the concept of separate, national transport systems operating in parallel, as opposed to having only one interregional system in all the countries. The existing transport infrastructure and services are not adequate for integrating the dispersed regional structure and, more particularly, for sustaining and developing local and regional economies, social services and social contacts. Current transport infrastructure and services only barely meet these objectives at the national level, but quite poorly on the entire Barents Region level. Additional transport bottlenecks are created at the borders.

There is right now a strong growth in the economy in the Barents region. The investments are large in the energy, metallurgy, forest, tourism and fishing sector. The exploration of new gas- and oil fields in Barents and Norwegian Sea has just started and the demands for transports connected to these huge investments will increase heavily in the future.

An overview of the basic features of the STBR project

Starting in the 1990's, there has been a considerable activity in creating cooperation frameworks in the Barents Region. The main forums that have emerged in this process are the BEAC (Barents Euro-Arctic Council) of the Foreign Ministries, the BEAR (Barents Regional Council) of the regional administrations, and the BEATA (Barents Euro-Arctic Transport Area) between the Transport Ministries, including EU Directorate for Transport, in the transport sector. All of them have already several years of successful existence. Recently, the cooperation between these forums has increased and developed well, but has previously suffered from lack and fragmentation of efforts and funding. The aim of the STBR project was to solve these problems. At the same time, ways of working are also created for the years to come. Sustainable Transport in the Barents Region (STBR) started with its first phase spanning over the years 2003–2005 and the second phase over the years 2006–2007. General objectives for the STBR concept are to:

- Strengthen transport planning cooperation in Barents Region
- Increase the common understanding of transport challenges in the region
- Help decision makers, planners, authorities and companies to see the region as a single transport area
- Promote sustainable development in the region



Key focus in STBR II was on implementing recommendations from STBR 1st phase on a concrete level.

STBR II project is financed by Baltic Sea Region Interreg III B Neighbourhood Programme and several authorities and actors in Finland, Norway, Sweden and Russia. The leading partner and project owner is the County Administrative Board of Norrbotten, Sweden. Practical issues concerning STBR II project management are handled by the management group and the STBR II Secretariat.

During the STBR phases I and II the common understanding, knowledge and know-how concerning Barents transport characteristics, needs and strengths were improved, extensive databases were compiled and reports written, and most importantly, the multi-national networks were build up. During the STBR II all parties agreed that there is a need to continue the Barents transport cooperation also on this level.

Future Challenges in the Barents Region

The ongoing and planned investments are large in the Barents region. That will mean a strong growth in the economy and a demand for better internal transport connections, but also better transports connections to/from the region.

The global warming will probably have a great impact also in the Barents region. For instance temperature and sea level will raise, extreme weather conditions will increase, and ecosystems will change. That will cause challenges for the transport, infrastructure and maintenance, as well as for the nature, business and everyday life of the local people. However, it will also produce lot of new potentials, for instance opening of the Northeast Passage, longer growing season etc. One measure to mitigate the global warming is to decrease the traffic. Joint transport planning and transport system in the Barents region will contribute that objective. Development of the fuel price and decisions related to taxation in national and EU level will have a great impact on transport and transport modes in the Barents region.

The fossil fuel, minerals, and forest resources of the Barents Region constitute a firm basis for economic growth, and future east-west cooperation and joint commercial activity will be based on the exploitation of these reserves. The fact that serious environmental problems exist alongside these rich resources only increases the need and potential for international cooperation in the Barents Region.

Appendix 2: General View of the Barents Region

Area and population

- Barents region consists of 13 sub-regions in four countries:

Norway	Sweden	Finland	Russia	
Finnmark	Norrbottn	Lapland	Komi Republic	Arkhangelsk County
Troms	Västerbotten	Oulu	Karelian Republic	Nenets Autonomous area
Nordland		Kainuu	Murmansk County	

- Total area is about 1.75 million square km, which is over 40 % of the area of EU
- Total population about 5 540 000, which is about 1 % of the population of EU. Population density varies from 0,3 to 8,0 inhabitants per km².
- The indigenous populations in the Barents region are the Sami.
- The Region has an arctic or sub-arctic climate. Especially at the Norwegian coast the climate is windy and wet, but rather mild, whereas interior parts of the region are dry and winters very cold.

Economic structure

- The economic structure of North-West Russia is based on raw material extraction and processing. North-west Russia has three main industries: mining and mineral production, forest industries, and the energy sector, including oil, gas and coal production and power generation. During recent years, trade and financing has become a bigger employer in north-west Russia.
- Northern Finland has considerable wood, paper and metal industry, as well as high-technology centres for example around the City of Oulu.
- The economy of northern Sweden is dominated by large raw material industry of mining, metallurgy, mechanical industry and wood, paper and pulp.
- The economy of northern Norway is dominated by oil and gas activities, water power, fishery and fish refining industry, and significant metallurgical industry.
- Roughly 70% of the labour forces of the seven Nordic parts of the Barents Region are, however, employed by the service sector. Especially tourism is becoming increasingly important for these regions. The Nordic parts of the Barents Region are moving from dependence on raw material exports to the provision of more developed services and industrial production.

Tourism: In 2006 number of the international travellers increased in Lapland 12 %, in Norrbotten 14 % and in Finnmark 8 %. Total number of the hotel nights made by the international travellers in these areas were 1,9 Million. Hotel capacity in the Barents region was 11 000 rooms in 2004. Planned investments for the tourism industry in Finland until 2009 are approximately 1 billion euros. Most of the travellers come from Germany, Great-Britannia, France and Holland. Biggest attractions are Arctic Circle, Nordkapp, Lofoten, Arctic Ocean, natural parks and tourism centres.

Natural resources

Oil and gas: Russia has the largest oil resources in the world. The largest natural gas reserves in the world are located in the Barents Sea and north-west Siberia. The Shtokman field is one of the world's largest natural gas fields and its reserves are estimated at 3.7 trillion m³ of natural gas and more than 31 million tons of gas condensate. This is enough to supply the total gas demand of the European Union for seven years. In the Nordic parts of the Barents Region, oil and natural gas can be found in Norway. Recoverable resources of Snøhvit field include 193 billion m³ of natural gas, 18 million m³ of condensate and 5 million tonnes of natural gas liquids. Annual exports are projected to be 5,7 billion standard m³ of LNG, 0,5–0,9 million m³ of condensate and 0,15–0,25 million tonnes of liquefied petroleum gases.

Minerals: The Russian territories of the Barents Region together produce 100% of the apatite concentrate, 99% of the ceramic pegmatites, 88% of the phosphates, 78% of the micas, and a significant portion of copper, nickel, cobalt, rare metals and earth elements, bauxites and building stones of the Russian Federation. Furthermore, rich deposits are currently being exploited in the region.

In Sweden, there are large iron ore mines, processing plants, copper mines, a lead mine, and Europe's largest open pit copper mine. 12 of the 15 active ore and mining sites of Sweden are located in the Norrbotten and Västerbotten, and their implication for the industrial production value in the mining branch is almost 400 billion SEK (43 billion €). Norrbotten produces almost 90 % of total production of iron in the EU. Västerbotten's mineral resources are also excellent and there are several active ore and mining sites.

Lapland's most important mineral resources are the chrome, copper and gold deposits. The chrome deposit of Keminmaa is one of the most significant ones in the world with ore reserves of approximately 150 million tonnes. The Province of Oulu possesses deposits of copper, zinc and sulphur concentrates, of which the Pyhäsalmi mining industry produces 1,2 mill.tons/year.

The County of Finnmark is Norway's most important mining county with iron ores, high quality slate and nepheline syenite. The annual production of iron ore is totalling 3.7 million tonnes. Nepheline production is about 280,000 tonnes, and building materials are practically unlimited, and found in all provinces of the Barents Region. 700,000 tonnes of ore and about 800,000 tonnes of slack are excavated per year in the County of Nordland. The bulk sulphide concentrate consisting of nickel, copper and cobalt, amounts to about 30,000 tonnes per year.

Forest: Forest resources of the Barents region are about 25 % of the forest resources of the whole Europe. Forest area of the region is equal to 60 % of the whole EU. Substantial proportion of the population is dependent of the forest sector through employment, forest ownership and lifestyle. Large and important nature conservation areas are located in the region. Forest resources and industry are located in the southern parts of the northern Sweden and Finland, and North-West Russia.

Fish: Fish industry is concentrated on Norway and Russia. In 2005 Russia was Norway's largest trading partner in fish. The export value has increased from ca. 230 million in 2003 to 430 million Euros in 2005. In 2004 over 200 000 tons of farmed fish was produced in the northern provinces of Norway, while the annual productions volume in the Murmansk region was 500–600 tonnes.

Hydroelectric power: Norwegian is mountainous and it has a long coastline and high levels of precipitation, which are all favourable conditions for HEP production. In northern Norway the estimated hydro-power potential is 32 700 GWh and about 57 % of that has been developed. Also northern Sweden has favourable conditions for HEP and the annual productions is approx. 26 000 GWh.

Appendix 3: Objectives for the Transport system of the Barents Region

Transport System

Effective infrastructure and inter-modality enables competitive entrepreneurship, fluent mobility of people, and sustainable exploitation of the rich natural resources of the Barents region.

Challenges of the peripheral location, long distances and thin cargo and passenger flows will be compensated by developing the joint transport policy. Actors of the region will increase the cooperation to optimize limited resources, to improve common coordinated transport system, and to develop sustainable regional structure.

Economic growth, exploring of the rich natural resources, climate change, and opening of the Northeast Passage will have a great impact on transport in the Barents region. A tendency to locate global centres of production of consumer goods to South-East Asia will continue. Especially the sea transport will continue to grow.¹

Transport system of the Barents region will be developed by improving the internal transverse connections and international transport corridors. Crucial corridors for the development of the economic life will be prioritized and promoted, and their trafficability will be improved. Transport corridors of the Barents region are vital parts of the international transport corridors. Along with improving the most important corridors, good condition of the whole infrastructure of the region will be secured. Cooperation between the states and enterprises will be stimulated to develop the best possible transport infrastructure.

Inter-modality will be improved to optimize the resources. Network of the multi-modal terminals will be developed for the whole region. Also best ways to compensate the challenges of the long distances, thin cargo and passenger flows, and harsh climate, will be searched. In order to create joint and coordinated transport system, it is vital to improve cross-border traffic, and simplify and unify administrative, legislative and cross-border formalities. These measures will improve the cost effectiveness and predictability of the transport, as well as competitiveness and operational conditions of the local industry and passenger traffic

Cooperation will be developed between different countries and authorities, and especially between Nordic countries and North-West Association in Russia. To ease joint research and development projects, transport and traffic statistics will be harmonized. Exchange of the data, statistics and information will be made easier.

To achieve the objectives for the international emission standards of the transport, environmental friendly, energy efficient and safe transport modes are going to be developed in the Barents region. Emissions are going to be decreased by increasing the competitiveness of the rail and sea transport, optimizing the activities of the terminals and introducing new technologies. However, road transport will be important transport mode also in the future.

Rail Transport

National rail networks are the basis for the joint and effective rail network in the Barents region, which enables good internal rail connections, and connects Barents region to the international corridors.

By increasing accessibility, improving efficient terminal solutions and border formalities, cost effectiveness of the rail transport will be improved. Increase of the cost effectiveness of transport enables the growth of the raw material trade, commerce of the industry and economic integration.

Increasingly share of the transport of the raw material industry will be made by rail. Rail network of the region enables faster connections compared to the road transport, and longer continues transport on rail. Effective multi-modal terminals enable to create more flexible and accessible rail transport. Inter-modal transport will decrease the transport costs of the industry. Also predictability of the transport time and costs will im-

¹ A draft Transport Strategy for the North-West Federal District of Russia (2007)

prove. Deliver possibilities and cost effectiveness of the raw material transport increases, transport costs might decrease and thereby local trade and east-west cooperation will increase.

International corridors and rail connections between the ports shortens the transport distances and times to the main markets. National rail networks will create solid and effective rail network of the Barents region, and will connect the region to the international corridors. Development of the Bothnian Corridor will connect the Northern Axis to the Northern Triangle. Thereby northern parts of the Nordic countries and North-West Russia will be connected to southern Nordic capitals and furthermore to the transport network of EU. Development of the east-west corridors will enable fluent transverse connections in the Barents region, which invigorates cooperation and trade between northern Europe and North-West Russia. The aim is to increase the cooperation and transit through the ports of the Barents region, and to develop the area for the demand of the increasing export².

Improved rail network will also enable to increase competitiveness of the passenger traffic. Services of the passenger traffic will improve along the cargo transport, when more rail sections are going to be electrified, speed limits increased, and border crossing and tariffs simplified and unified. In a long run increased international passenger volumes enables a possibility to organize fluent and competitive rail connections between biggest towns in the Barents region.



Aviation

Existing air connections will be maintained in the Barents region and new connections will be developed when needed. To secure existing air connections and to develop new ones, new ways to finance air traffic of distant areas will be searched, and marketing activities, as well as distribution and information systems, will be developed.

Air traffic connects areas together and improves the conditions of the local economic life. That will improve significantly social and economical cohesion in the EU. Peripheral situation and long internal distances emphasizes the meaning of the fly traffic. However, thin passenger volumes create challenges to create and maintain connections. Lack of internal flight connections makes it difficult to create connected economic zone and business potentials for the local enterprises.

Flight traffic to Barents region will growth moderately along with the growth of the international tourism and economic growth. Also supply of the straight flight connections from the Barents region to Europe will increase. Demand of the internal flight connections will continue to be minor, besides Norway, where flight transport will continue to be important transport mode in domestic and regional traffic. Profitability of the flight traffic will be improved by searching new ways to maintain small airports and thin traffic flows. Problems caused by low passenger volumes will be tackled by improving and developing the subsidy systems and alternative flight services. To maintain existing flight connections, airports and airplanes will be modernized, regularity and reliability will be improved, and distribution systems, flexibility, and marketing and promotion activities will be developed. Also the custom procedures, safety control and legislation will be improved and harmonized.³

² STBR I: Barents Railway Network: Needs Study (5/2005);

STBR I: Barents Railway Network: Case Studies (6/2005)

³ STBR I: Barents Regional Aviation – Conclusion and recommendations (8/2005);

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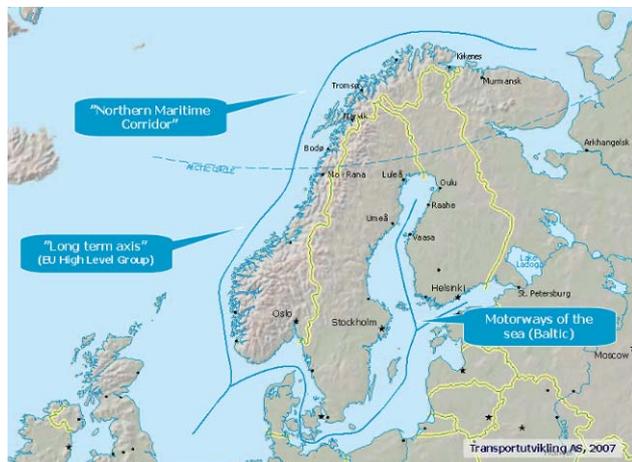
Maritime

Growing exploitation of the energy resources in the Barents region will increase regular sea transport and cargo volumes through Barents region.

Several competitive international transport chains based on sea transport will arise, which will improve the economy, efficiency and safety of the transport.

Most important water systems in the Barents region are Norwegian and Barents Seas, Gulf of Bothnia, White Sea and big lakes of Russia. Most of the ports are located on Norwegian and Barents Seas, and Gulf of Bothnia, which are connected by road and/or rail network. Fluent transport chains, based on the sea transport, to main markets will come more and more important. These transport chains will be developed so that sea transport will become more flexible and competitive. Good connections from the ports to the railway, road and surface water network will be ensured. Cooperation and functionality between ports and terminals will be developed to enable inter-modal transport. Regular sea transport and cargo volumes through Barents region will grow also in the future.⁴ Sea travel will continue to be important travel mode for regional passengers and tourists especially in Norway. Development of the energy and fish industry will have a great impact for the need and structure of sea ports in Norway and Russia.

Essential corridors for the sea and inter-modal transport will be Motorway of the Baltic Sea, Northern Maritime Corridor and Northern Axis. Motorway of the Baltic Sea connects Barents region to Central and Western Europe, and it will become part of the European transport network. Northern Maritime Corridor connects Norway and Russia to EU.⁵ In Northern Axis sea transport composes an essential part of the transport corridor. Transport corridors will enable congestion free transport services around the year to correspond the needs of the import and export. Development of the cooperation between the ports is a precondition for successful inter-modal transport chains. Barents Port Forum (BaPF) will be developed.



Opening of the Northeast Passage will improve the possibilities of the sea transport and exploitation of the energy resources in Norwegian and Barents Seas, and its significance as a transport corridor between Europe and Asia will grow.⁶ Utilisation of the Northeast Passage will probably have great impact on ports in the Norwegian and Barents Seas, logistic chains and on the whole region. Also utilisation of the enormous gas and oil reserves will increase the sea transport especially in Norwegian and Barents Sea. Huge investments and increasing transport volumes will strengthen the international significance of the ports in the Barents region. Exploitation of the Shtokmanovskoye gas field and other big oil and gas investments will create huge potentials for the logistic companies and hauliers, and also for the development of the transport corridors in the Barents region.

For the sea transport of the Barents region it is essential to secure the transport to the ports also during the wintertime, which will demand the development of the icebreaking in the Gulf of Bothnia. To protect the unique ecosystems of Norwegian, Barents and Baltic Seas, will demand the development of the accident risk management, traffic safety, level of the prevent actions for vessel pollution, and environmental cooperation.⁷

⁴ A draft Transport Strategy for the North-West Federal District of Russia (2007)

⁵ STBR II: Coordination support for the Barents port association working group (2007)

⁶ Impacts of a Warming Arctic – Arctic Climate Impact Assessment (2004)

⁷ Breaking the ice in the Baltic (2003);

Cooperation for Sea Transport in Bothnian Bay (2007)

Road Transport

Main transport corridors will enable homogenous, reliable and high-class road connections, which will improve internal and external accessibility of the Barents region.

With maintenance of the lower level road network, transport of the forest, mining and fish industry, accessibility of the tourism centres, and fluent and safe mobility of local people will be secured.

Fluent border traffic and better predictability of the travel time will improve the cost efficiency of the transport, and popularity of the cross-border passenger traffic.

Concentration of the settlement, changes in the mining and forest industry, and exploitation of the new oil and gas fields changes the needs of the road transport constantly. Traffic volumes will concentrate more and more to the biggest towns of the Barents region. Therefore maintenance of the lower volume roads will become more challenging. Biggest challenges of the road transport will be the accessibility, maintenance of the lower level roads and increase of the transport costs.⁸

Accessibility will be improved by building missing road connections and by compensating missing road connections with rail connections. Main transport corridors will offer reliable, safe, homogenous and high-class road connections in the whole Barents region. Transport corridors enable good internal connections and also connections to the main markets of Russia, Asia and Europe. Also lower level road network will be maintained in a competitive condition to enable the transport needs of the forest, mining and fish industry as well as local people. To create continuous and homogenous road network, national road categories and legislations will be harmonized, and number of the border formalities will be decreased. Road network will be connected fluently to the railway network and ports, and share of the multi-modal transport will increase.

The continuation of The Barents Traffic Safety Forum will increase the traffic safety in the Barents region⁹. Traffic safety and fluently of the heavy traffic will improve along with harmonization of the national legislation and increased inspections. Also development of the traffic information and the transport subsidy system will improve the road transport.¹⁰ Traffic safety will be included to the quality systems of the hauliers.

Good traffic connections are vital for the tourism industry. Development of the tourism industry will be supported by improving accessibility of the main travel destinations, improving the public transport and creating new tourism roads. By creating international tourism roads, tourism will be centred and Barents region will be marketed as a single transport area. Single travel destinations will create a solid travel area with better transport connections, and from tourism point of view, the value of the region will increase. Functionality of the international tourism roads will improve, when number of the border formalities will be decreased and the public transport will be developed.¹¹

International objectives for the energy savings and the emission standards will be fulfilled by reducing environmental damage of the traffic, and by developing the energy friendly transport modes. To obtain the objectives, hauliers are encouraged to the energy savings, emission of the private cars will be reduced, and logistic chains will be optimized.

⁸ STBR I: Passenger and Freight Flows in the Barents Region: Study on transport flows and infrastructure (1/2004)

⁹ STBR II: Traffic Safety of Heavy Vehicles in Winter time in Barents Region (2007)

¹⁰ STBR II: Traffic Safety of Heavy Vehicles in Winter time in Barents Region (2007)

¹¹ STBR I: Road Transport Corridor Study: International Tourism Roads in the Barents Region (1/2005)