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TransBaltic

Integrated transport system in the BSR

Thoughts on TransBaltic's Macroregional Transport Action Plan

How green will the future be?

By **Przemysław Myszka**

The Policy Reports, prepared by the TransBaltic project, summarise a number of trends and developments by the year 2030 which may result in considerable changes to transport patterns. This, in turn, may have a significant impact on the position of the Baltic Sea region as a sustainable economic growth area now and in the near future.

TransBaltic has tabled a vision for a future-integrated multimodal transport system in the BSR by year 2030. The so-called 'green scenario' assumes balanced and positive economic growth in the Baltic Sea region. Vigorous development of the new EU Member States is expected to boost trade with their EU neighbours and the Far East benefitting urban centres and transport hubs located on transnational transport corridors in both east-west and north-south relations.

In terms of the transcontinental trade exchange, the scenario predicts the emergence of alternative options to the traditional maritime route crossing the Suez Canal and bypassing Western Europe. The receding ice cover in the Arctic Ocean gives way to navigation along Siberian coasts; this may grant the Barents area an important function in handling transcontinental flows, bringing growth impulses to the northernmost cities and ports. With stricter eco-regulations on the horizon, too, not mentioning unstable fuel prices, the Northern Sea Route could help to cut down distances and thus fuel consumption.

With the improved transport and logistics conditions along the Eurasian land bridge effective supply chains will also develop between the western part of China, Kazakhstan, Russia and the European Union. A viable alternative will also be provided through good transport connections between the Black Sea and Adriatic ports and origin/destination areas in the Baltic Sea region.

The green scenario anticipates effective implementation of regulations, restrictions and incentives, which tackle transport externalities. It assumes that the European Commission's transport greening policies manage to internalise transport costs (in other words transport users will pay for the 'hidden' costs generated by transport, such as air pollution, noise, congestion or accidents) and improve complementarity of the transport modes. Also, ambitious targets of the Europe 2020 strategy will have to be met (greenhouse gas emissions reduced by 20% compared with 1990 levels). However, an intensified trade exchange both within the BSR and in the transcontinental dimension may challenge the EC's aspirations to curb energy consumption and emissions in the transport sector.

The green and efficient multimodal corridors are expected to provide better operational conditions than in the 'conventional' transport network. And, for this reason, they must be – according to TransBaltic – an area of policy intervention with specific legislation, harmonisation measures and incentives. And above all with proper management schemes, including steering mechanisms to supervise and enhance performance of infrastructure and services offered in the corridor. Such a policy is instrumental in combating hard and soft obstacles hindering the efficient flow along the corridor and to result in reduced transit times and costs as well as mitigate environmental and social impacts.

“Vigorous development of the new EU Member States is expected to boost trade with their EU neighbours and the Far East benefitting urban centres and transport hubs located on transnational transport corridors in both east-west and north-south relations.

China Time Hamburg/ Mahjong, photo: www.mediaserver.hamburg.de/Christian

Project part-financed by the European Union (European Regional Development Fund)
Baltic Sea Region Programme 2007-2013
SKÅNE

Photo: imagefoto.de

Photo:www.mediaserver.hamburg.de/Odile

Nonetheless, as the green scenario proposes a bright future, there are serious challenges that need to be overcome. Among them are rising energy prices and transport sector externalities, climate change and its impact on transport, lack of rewarding mechanisms for developing and using green infrastructure, lack of a coordinated policy approach in introducing green corridor operation standards across national borders and, last but not least, a lack of policy mechanisms to maintain a level-playing field for all market actors, irrespective of the transport sector they operate in. ●

Photo:www.mediaserver.hamburg.de/Odile

How to establish an efficient transport system in the Baltic Sea region?

Andrey Boldorev
Deputy Chief of Rosmorport's Development Department

- **What conditions might occur for the ports in the Baltic to serve as gateway from Central and Far East Asia to European landlocked countries – both for the maritime and rail-borne cargo?**

Apparently, the transhipment facilities of sufficient capacity for Asian goods are the key condition. Considering the potential growth of cargo volumes, Rosmorport takes part in port infrastructure development in the Baltic region. For example, lately Rosmorport has completed the construction of water areas for new terminals in Port of Ust-Luga. Yug-2 (South-2) and Novaya Gavan (New Harbour) terminals

Photo: www.mediaserver.hamburg.de/C

> "The new 25 MW asymmetrical icebreaker ordered by Rosmorport is planned to ensure icebreaking assistance all the way along the Arctic passage.

Project part-financed by the European Union (European Regional Development Fund)
Baltic Sea Region Programme 2007–2013
SKANE

were constructed for transhipment of cars including those imported from Asian countries. The first stage of the New Harbour terminal (ro-ro berth 152 m in length, 8.1 m deep, stacking area 20 ha, commissioned in November 2011) has the capacity of 150,000 automobiles annually. The second stage (dredging to 9.8 m, stacking area 30 ha) will be completed this year and will enhance the terminal's capacity by 100,000 units per year. Further development plans for the terminal include dredging to the depth of 12 m, the construction of one more 256 m long ro-ro berth and extending the stacking areas to 60 ha. Meanwhile, South-2 is a multipurpose transhipment terminal with 8.1 mln tonnes of planned capacity. Rosmorport provides the construction of water areas for the terminal. First two stages of the project have been commissioned by now, the investments from the Federal Investment Fund amounted to EUR 50 mln, while two next steps are due to be completed by the end of the next year. Besides, the first stage of the new container terminal in Ust-Luga with its 2.85 mln TEU of total capacity has been constructed with the participation of Rosmorport.

- **In what way Black Sea and Adriatic ports could become a viable alternative for transport of goods to/from the BSR?**

Currently Black Sea ports are not considered as an alternative to Baltic ones. Rosmorport's development plans in the Black Sea region (such as the construction of the dry cargo area in the seaport of Taman) are intended to handle growing cargo volumes in the region, not to be an alternative for other ports.

- **Is the Arctic route a possible alternative to Suez Canal?**

Yes, it could be an attractive alternative, especially for goods from the Far East Asia, as using the Arctic route will decrease the transportation time twice. But in can only be such an alternative in the presence of essential infrastructure that provides safe navigation. As part of that safety infrastructure, the new 25 MW asymmetrical icebreaker, which is being constructed right now by the order of Rosmorport and funded from the Federal budget, is planned to ensure icebreaking assistance all the way along the Arctic passage.

Anders Sjöblom

Head of market development at Port of Oskarshamn

Photo: www.mediaserver.hamburg.de/M

> "When efficient supply chains are established across the Eurasian land bridge, they will offer both alternative and competitive services and timetables for container shipping routes on the Asia-EU rotation.

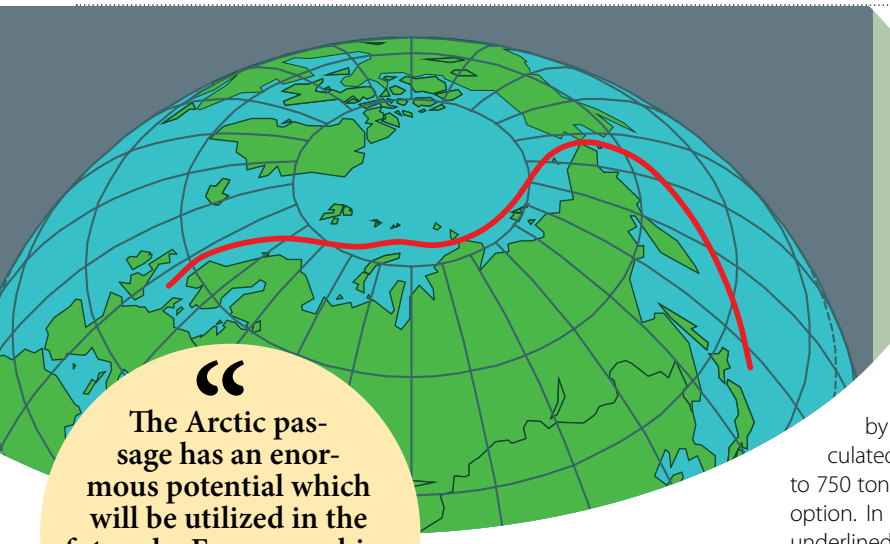
- **What will the Baltic region's transport pattern look like in 2030?**

When efficient supply chains are established across the Eurasian land bridge, they will offer both alternative and competitive services and timetables for container shipping routes on the Asia-EU rotation. The land bridge option could also take care of Kazakhstan and Russia's hinterland cargo potential. When regular transports on reliable timetables kick off, on the route as requested today, volumes will increase rapidly. What's more, the land bridge will be competitive for the transportation of freight from western China, but – maybe in 2030 – it could also attract volumes from mid- and eastern China. However, the effectiveness of vessels to transport high numbers of containers will remain one of the strongest competences of the shipping sector. The majority of the westbound cargo going via the Eurasian land bridge will be time crucial products for markets which would like to avoid large storage and stockrooms, e.g. parts and spare parts for vehicle and telecom production sites in Europe – and in the opposite direction for assembly in China. On the contrary, finished goods (vehicles, telephones, clothes) will be traditionally carried on vessels from Asia to Europe, due to high volumes and time not being so essential. This will deepen the existing imbalance in transport using containers and PCTC vessels between China and Europe. Today's existing imbalance is already tricky to solve and will, therefore, cause strong resistance to the Eurasian land bridge.

- **What is the role of the public sector in shaping the region's transport network? Should the major Baltic container ports receive public support to help grow to their hub potential?**

The mentioned land bridge will be a complement in the long term, even when volumes on it are predicted to be relatively high. The amount of freight should be high enough to generate new transport corridors, e.g. East West, CARGOTO, Midnordic Green Corridor, etc. The real challenge is to break through transport routines, which are deeply rooted. When all these projects set off around the Baltic Sea, they will supplement each other. But it will also bring changes – some traditional bulk ports are going to shift to ro-ro and boxes traffic. Nowadays, major Baltic container ports compete fiercely and the relatively low costs to transport on road and rail on long routes will make it even more difficult for them. In this context, the EU should work towards common rules regarding fees for road, rail and sea transports. The charges should be set up so that transport will use the shortest way and the nearest port. The EU should use public support to minimize the gap of fees between transports and not to give public support to some hubs or ports.

Paweł Szynkaruk
Managing Director at Polsteam



> **The Arctic passage has an enormous potential which will be utilized in the future by European shippers who carry resources from the Baltic and North Sea ports to Asia.**

Heritage, a 74,000 dwt tanker, carried 70 thou. tn of gas condensate for a client in Thailand. And, finally, MV *Rainfrost*, a 13,000 dwt freezer, travelled in the opposite direction and brought fish from eastern Russia to St. Petersburg.

West European shippers are counting on the possibility of using the NSR on their Europe-Asia trade lane. The alternative choice is the Suez Canal or going around the whole African continent, but it all means a longer travel distance, higher fuel consumption, and the risk of being raided by pirates. What's interesting, the operator of *Sanko Odyssey* calculated that taking the Arctic passage resulted in fuel savings of up to 750 tonnes (approx. USD 0.5 mln) when compared to the Suez Canal option. In turn, the Greek company Laskaridis, operating the *Rainfrost*, underlined that travelling at an "economic speed" from Petropavlovsk-Kamchatsky (north-east of Japan) to St. Petersburg, it travelled 6,633 NM in 22 days. Using the more traditional way – through the Panama Canal and the Atlantic – would require covering over 12,000 NM, which would take 40 days.

One condition must be fulfilled though, in order to carry goods on the NSR, vessels must have the 1A ice class. Unfortunately, only a few merchant ships have the proper certification. Nonetheless, I personally think that the Arctic passage has an enormous potential which will be utilized in the future by European shippers who carry resources from the Baltic and North Sea ports to Asia.

- **Is the Arctic route a possible alternative to the Suez Canal? If it really becomes passable, how could the northern part of the BSR and Norway accommodate larger volumes of transcontinental cargo?**

As for the seaborne trade between the Baltic and North Seas with Asia, going via the Arctic passage, it will surely be a competitive alternative to the Suez Canal route in the near future. Analyses of climate change forecast that the so-called Northern Sea Route (NSR) will be ice-free all year round somewhere around 2050. But we don't need to look ahead that far – now the passage is used by shippers from June to October. In light of this, the previous year was a breakthrough. In the summer time, altogether 15 commercial vessels travelled through the Arctic and Sovcomflot's tanker *Vladimir Tikhonov* with its 162,362 dwt set a new record for deadweight seen on the passage (the ship carried 120 thou. tn of gas condensate from Murmansk to China). Until now, the major bottleneck of the NSR had been the Sannikov Strait, located south of the New Siberian Islands. It was a serious obstacle for ships, putting rigorous constraints on the vessel's draught and speed. In 2011 the melting ice cover enabled to mark up a new route, north of the New Siberian Islands, where the draught is up to a decent 12 m.

Last year, apart from the mentioned tanker *Vladimir Tikhonov*, other vessels safely journeyed through the Arctic passage. MV *Sanko Odyssey* (chartered by Nordic Bulk Carriers), a 75,000 dwt bulk carrier, transported 70 thou. tn of iron ore from Murmansk to China. Scorpio Tankers' MV *STI*

- **Does the introduction of green transport solutions truly bring benefits or does it only result in extra costs? How to maintain and improve transport's mobility, while energy and fuel prices are unsteady and prone to go sky high?**

Naturally, the introduction of eco-solutions in maritime transport is beneficial, as it helps to protect the environment. But, on the contrary, as many people from the shipping industry stress, such measures are pointless if they are not implemented on a global scale. Since we can observe a major dose of unwillingness of the world's main industrial countries to follow the eco-path, every green and local action will be thrown overboard in the end.

The same goes for selecting only a few areas to become more environmentally-friendly. I find it utterly abortive to select only the Baltic and North Seas as well as the English Channel in the ECA regulations. From the very start of 2015, shipowners will have to tank up fuel with 0.1% sulphur. The cost of low sulphur fuel is higher, up to USD 300 per one tonne, than

normal fuel. The new law will hit hard shipping companies that operate regular lines and in this case – especially ferry owners.
Furthermore, companies from the ECA are forced to seek alternative ways to running the business, as to stay competitive to their rivals from the Mediterranean and the Irish Sea who won't be subjected to stricter regulations. In this context, the Norwegians are pushing the idea of shifting to liquefied natural gas (LNG) in short sea shipping as soon as possible. This fuel cuts down CO_2 and SO_x emissions significantly – but it's far too early before the concept can be introduced on a commercial scale. Firstly, engines running on LNG are still a novelty (engineers are struggling with, e.g. the problem of methane slip, where CH_4 is a 25 times stronger greenhouse gas than carbon dioxide) and secondly – the entire fleet sailing on the North Sea and within the Baltic Sea region should be replaced. One could get a heart attack just thinking about the cost of it!
Scrubbers are another option, a very effective one, because they can clean up to 98% of SO_x, but are expensive to buy (USD 1-5 mln). You can hear from the stakeholders that only a few really determined shipowners will retrofit their ships. Last year in August, Interferry, the association of ferry operators, announced that 60% out of 108 analysed ferries are not fit to use scrubbers – because of technical issues or the investment does not make economic sense.
In Scandinavia you can observe the eco-lobby forcibly advocating in favour of shore side power supply, so that vessels may use an external source of electricity while berthing at a port's quay. The target is to set up shore side power supply in 15 ferry terminals across the Baltic and North Seas. But, of course – proper appliances, costing a mere several hundred thousand US dollars, must be installed onboard as well.
As can be seen, every one of the abovementioned eco-solutions implicates serious financial burdens. In the first instance, they will be laid on the shoulders of ship owners, but afterwards a part of the overall charge will be transferred to their clients, be they cargo carriers or ordinary travellers. All of this may result in a backshift of freight from sea onto roads, making them even more congested to what they are right now. This will be a full negation of the primary goal, which is to reduce harmful emissions.

Kimmo Mäki

Managing Director at Port of Helsinki

Photo: www.mediaserver.hamburg.de/C

> "Those who can find more energy efficient solutions will win.

- **In what way can Black Sea and Adriatic ports become a viable alternative for transport of goods to/from the BSR?**

In case a regular train connection will come, perhaps the route would work for some regions located inland in the BSR region. The economic growth and growing intra-EU traffic can support the building of such a train connection.

- **Is the Arctic route a possible alternative to the Suez Canal? If it really becomes passable, how could the northern part of BSR and Norway accommodate large volumes of transcontinental cargo?**

Naturally, this is a possibility in a long term perspective – in case global warming makes the route good enough for sailing (better ice conditions). Still, I don't believe in a rapid growth of the route. Secondly, ports located in the northern part of Russia and Norway are not suitable, because the production and consumption areas are located quite far away from them.

- **What is the role of the public sector in shaping the region's transport network?**

I think the EU should play a stronger role in defining national taxes so that environmental issues are of more concern.

- **Is the industry going to fulfil the green scenario for BSR transport development? Does the introduction of green transport solutions truly bring benefits or does it only result in extra costs?**

I'm sure that in the future the importance of green issues is going to have an even stronger status in the decision-making process. This will also concern private companies. So, enterprises have no other option than to take it seriously, if they want to stay on the market.

- **How to maintain and improve transport's mobility, while energy and fuel prices are rising or strongly fluctuating?**

I think the prices are increasing. But, on the other hand, that's how the market acts. And the increase is influencing all parties in the same way. Simply, the winners are those who can find more energy-efficient solutions.

Ulf Sandevärn

Marketing Manager at Port of Karlshamn

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> **“ We all support the general environmental idea, but we also have doubts whether it is realistic to reach the ECA ambitions by 2015 due to a lack of proven alternative technologies and access to alternative fuels.**

- **What will the Baltic region’s transport pattern look like in the near 20 or 40 years?**

In general we can see that Swedish trade with Eastern Europe, Russia/CIS and Asia is expected to grow by 200% by 2050, while an increase of 60% will be seen in relation to trade with “traditional” markets such as West Europe as well as North and South Americas. According to this scenario, Port of Karlshamn, of course, sees a very interesting potential for growth and expansion; the same for several other ports in the Baltic Sea. General trends for transport and logistics show that the highest potential will be for intermodal transportation in order to provide high frequency, timetabled, fast and accurate carriage of goods, which will also be competitive in terms of pricing, thus involving both short sea shipping and rail/truck via Baltic Sea.

- **In what way could Black Sea and Adriatic ports become a viable alternative for transport of goods to/from the BSR?**

We see a growing interest in the possibilities emerging from the presently offered sea-rail-sea via Klaipėda and the Black Sea to/from Turkey. Depending on the prices, frequency, lead time and security, this corridor may have an interesting future.

- **Is the Arctic route a possible alternative to the Suez Canal?**

To our knowledge the Northern Sea Route is so far only open about one month per year. Personally I am sceptical whether the Arctic passage could provide a reliable alternative to the present routes for frequent container shipments, even if this period is longer. And, even if open the route will face numerous periods with very rough weather conditions influencing timetables and cargo. On the other hand, we will probably see increased traffic for the energy segment with oil/gas tankers via the Arctic.

- **How should the transport and logistics conditions along the Eurasian land bridge connections be improved to enable effective supply chains on the China-Kazakhstan-Russia-EU rotation?**

Freight hauliers and terminal operators must be able to provide the product concepts/services at least on the same level as the container shipping lines offer today. Shippers will not go for anything less. Otherwise, we can see problems arising, such as the issue of single documentation (same as Bill of Lading) or harmonized pricing across all links within the chain (state pricing policy, railway pricing, terminal operators, etc.). Also the land bridge route can only serve as a complement to the ordinary route due to its capacity. Considering these factors, the route will probably attract mainly time-sensitive cargo such as automotive parts, spare parts, foodstuffs, fashion and so forth. However, with the expected strong growth in the corridor in combination with our geographical location and timetabled connections by sea to both Klaipėda and St. Petersburg, we see an interesting potential for our port in this corridor as a future hub in Sweden for cargo. Therefore, Port of Karlshamn not only follows the development of the land bridge route with great interest, but it also leads the way through its own initiatives on this matter, including new investments and market activities.

- **What is the role of the public sector in shaping the region’s transport network? Should the major Baltic container ports receive public support to help grow to their hub potential?**

In our opinion subsidies and state grants in many forms are “disturbing” the normal market mechanisms, thus setting conditions for free competition aside. We can only think of a few cases where the public/states should be involved – e.g. supporting the infrastructure to/from ports. In the case of Sweden the state has made selected corridors a priority where public investments are concentrated. Unfortunately, in my opinion, there are only a few signs showing a real understanding of the expected large growth in the east-west direction, which calls for much improvement in the infrastructure leading to ports, as Karlshamn, in southeast Sweden.

- **Does the introduction of green transport solutions truly bring benefits or does it only result in extra costs?**

First we must clearly define “green” as it relates to the market because the perception of the term is varying. One step taken is the “Green Corridor Manual” which will be one end product of the East West Transport Corridor II project. If corridors are developed according to criteria as proposed in this manual the market and the public will benefit and save money in the end.

- **What can you make out of the EU 3x20 strategy by 2020 (increase the share of renewable power to 20% and decrease both GHG emissions and energy consumption by 20%)?**

According to the Swedish Bio Energy Association it looks as if the EU will achieve this goal, and some countries – like Sweden – will even exceed it. One huge challenge for the BSR are the ECA rules 2015 which will influence the route network in the Baltic Sea. We all support the general environmental idea, but we also have doubts whether it is realistic to reach the ambitions by 2015, due to a lack of proven alternative technologies and access to alternative fuels. At the same time, the Mediter-

ranean market was given five years longer to reach the same goal. I fear that the only consequence will be more severe conditions in terms of competition for the heavy export industry in the BSR resulting in decisions to stop newly planned investments and move them somewhere else in the world. The whole transport industry operating in the BSR will suffer from this. At the same time, nothing is being done to reduce emissions and competition from trucking companies from low cost countries which use cheap fuels filled elsewhere, while truckers in e.g. Sweden tank up more environmentally-friendly fuels at a higher price/tax. Road tolls in Germany and Poland have shown no effect on the number of truck loads on the road, too. To start with, fuel taxes should be harmonized within the EU in order to make competition more even.

Roman Poersch

Managing Director at Wilhelm Borchert GmbH

- **How should the transport and logistics conditions along the Eurasian land bridge connections improved to enable effective supply chains on the China-Kazakhstan-Russia-EU rotation?**

The Eurasian land bridge needs reliable transit timetables, efficient shunting and railway infrastructure, smooth documentation and monetary flows. Not until then will it be able to secure a significant place in the Europe-Asia trade pattern.

- **Should the major Baltic container ports receive public support to help grow their hub potential?**

If real social benefits (return on investments and a positive socio-economic benefit/cost ratio) can be ensured, which would not be realized without public support, then yes – the public sector could assist major Baltic container ports in their hub role.

- **Does the introduction of green transport solutions truly bring benefits or does it only result in extra costs?**

It does produce real benefits in terms of environmental and health cost savings, and it will become a competitive advantage for those who introduce them efficiently.

Photo: www.mediaserver.hamburg.de/M.Wirrwa

> **“ If real social benefits are ensured, which could not be realized without public support, then the public sector could assist major Baltic container ports in their hub role.**

- **How to maintain and improve transport's mobility, while energy and fuel prices are rising?**

People from the transport industry must become as independent of fuel costs as possible, e.g. by introducing of non-fossil fuel-based propulsion or installation of technologies such as scrubbers on ships, use of the most fuel efficient technology such as EURO 5 or 6 trucks. The utilization of existing infrastructure and transport means must be increased.

- **What can you make out of the EU 3 x 20 strategy by 2020 (increase the share of renewable power to 20% and decrease both GHG emissions and energy consumption by 20%)?**

In my personal opinion, achieving the goals of the EU 3x20 strategy will result in compliance of the private sector/industry with future regulations, realization of cost savings and competitive advantages, not to mention the contribution to environmental savings and long-term welfare.

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