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SKÅNE

TransBaltic WP 4.1 Seminar in Elbląg, Poland

# The future of small ports

**During 7th-8th June in Elbląg TransBaltic and the Baltic Ports Organization hosted a seminar entitled "Development perspectives for small and medium Baltic Sea ports", gathering BSR stakeholders to share different points of view towards their possible development paths.**

Seminar speakers, representing port authorities, scientific institutions and stakeholders from Denmark, Finland, Germany, Poland and Sweden focused on the management of small and medium-sized ports, financing tools, good practices as well as discussed legal issues and platform cooperation.

Bogdan Ołdakowski, secretary general of Baltic Ports Organization, presented three dominant models of managing the European Union ports. The first is the Latin model, centralized and with the dominant role of the central government. The second is the Anglo-Saxon standard where private ownership prevails and the state keeps a hands-off policy. The last is the Hanseatic model, being a combination of the previous two, in most cases adopting a landlord model, where the municipality manages the port's land and private companies undertake the operations (apart from Sweden, where local governments do both). After his lecture, case studies concerning small ports were presented.

Photo: Port of Elbląg

Markku Mylly, managing director of the Finnish Port Association, at the beginning presented the background of Finnish port business. The majority of Finland's ports are governed by municipalities. But this state of matter is going to change by the end of 2013. A new law is coming into force at the beginning of 2012, enforcing the corporatization of every port in Finland. Markku Mylly presented the Port of Kalajoki as an example of the uncertain future of small Finnish ports.

Kalajoki is a port highly specialized in handling timber, serving 60 sawmills. This is both its strength and weakness. On the one hand, the specialization ensures high quality service and if it wasn't for the port, many of the sawmills wouldn't be set up. But on the other hand, the lack of diversity means dependence on one industry; when the price of its commodity decreases rapidly, the economic sense of running the business decreases and since the profile of a highly specialized port is a rigid one, the fear of non-profitability shows up. What's more, small ports alone are yielding profits too small to make investments. Until now, the municipalities aided their ports, i.e. the local government bought land for the Port of Kalajoki to build new warehouses and a new berth. Under the upcoming law such direct assistance will be prohibited. Markku Mylly emphasized that there are three solutions for small ports, which were cut off from municipal funding and alone are not able to make investments or even go on with their business. Ports can merge to diversify their services, find private investors or finally go bankrupt. In the case of the Port of Kalajoki, the last option would mean a chain reaction – the liquidation of a sawmill-dependent port would result in the liquidation of port-dependent sawmills.

Anders Sjöblom, from the Port of Oskarshamn, said that there is a similar state of affairs in Sweden. The country has 52 ports, 45 of which are medium and small ports, owned by municipalities. As opposed to the Finnish model, the Swedish local governments not only manage the port's land but also handle its operations. But the ownership is changing from public to private, first in big ports like the Port of Gothenburg, then in smaller ones. This is a prime chance for development because ports should be run by professional managers, not politicians. There are also other pros and cons for running a small port in Sweden and Anders Sjöblom pointed out the rationale behind small Swedish ports. To be profitable one must have the support of local industry, i.e. the forest industry like in Oskarshamn; 10 thou. TEU handlings, 10.5 thou. trucks going both directions, a good location, since the faster the cargo goes, the less money is spent on waiting. If there are many ports in close vicinity, a port may as well start specializing, because the total volume of the region is split between many ports and none of them has the suitable throughput to survive on the market in the long run. However, if the industry has a bad patch, the specialized port may collapse (similar to what is happening in Finland). Anders Sjöblom commented that, "the port needs more legs to stand on," which means investments in infrastructure from cities to the ports (motor-, high-, and railways), since Sweden is European China, living mostly off export. Nevertheless, there are other opportunities to pursue, like opening the port up to ferries or handling small amounts of very profitable cargo such as oil products.

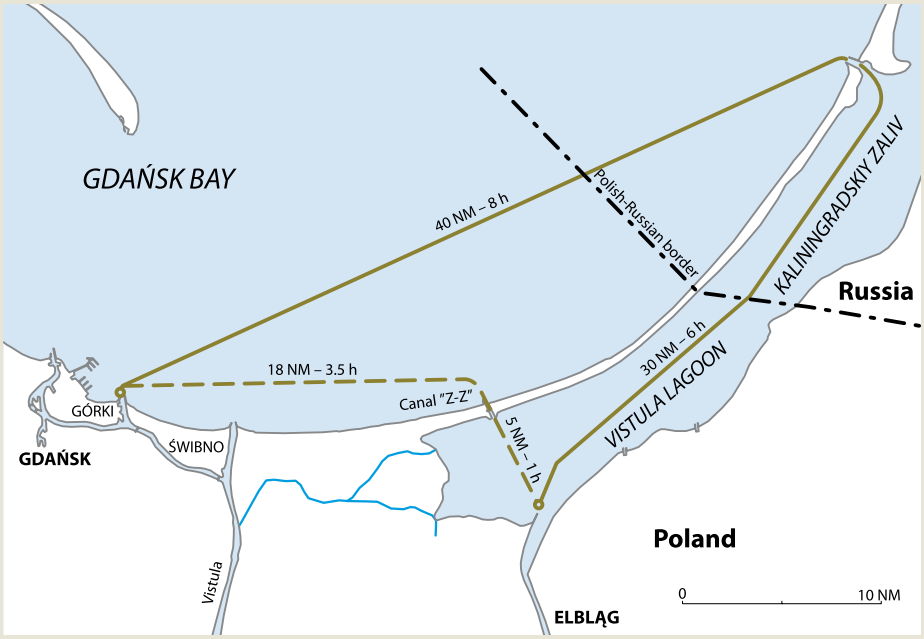
The last difficulty to overcome is the municipalities' policies towards their ports. As it was stated, presently a Swedish municipality has the duty to govern a port's territory and its operations. But on the other hand, the local government has to provide new living space for citizens. The land close to the sea is very attractive, so a temptation to alter the port's land into building plots appears. This action makes economic sense, since selling and raising buildings is more profitable to the municipality's treasury than running a port. According to Sjöblom, small ports are no match for the municipalities, so sooner or later they are eaten up. There are two ways to deal with this problem. The first is a faint one; the central government can decree that a port is strategic for the country and will block the municipality's actions against the port. But yet the state policy may change and if the port can't economically stand up it will be consumed. Anders Sjöblom persuades that the best way to resolve the problem is to corporatize the port, diversify its services and attract investments in infrastructure, which altogether will result in the port's financial strengthening. ■

**Przemysław Myszka**

Port of Elbląg and the Vistula Lagoon

# Key factors to its development

**The Port of Elbląg, Poland, is a typical inland river-sea port. It offers its services specifically to inland waterway passenger and cargo transport; pleasure boats as well as short-sea shipping and potential ferry services. Therefore, the development scenarios of the port depend on the outlook of each of these forms of navigation.**




Freight inland transport in domestic relations is now carried out between Port of Elbląg and the Tri-City agglomeration (a metropolitan area consisting of Gdańsk, Gdynia and Sopot), vessels on this route most often carry oversized cargo. Any freight increase in other relations, e.g. through the Vistula river to Bydgoszcz/Warsaw and Vistula – Oder river route is in the current state of the waterways impossible. In addition, the bridge recently built in Kępki on the Nogat river has a clearance of only 3.4 m, which prevents navigation on the inland route to any ships other than yachts which can fold their masts. Regardless of the latter and other local difficulties, there is a general problem regarding the state of waterways in Poland, which in fact excludes regular cargo freight with the existing tonnage. More positive prospects seem to be in line with inland passenger traffic in relation to demand for Elbląg port services. The development of passenger shipping is influenced by two major factors: increase in wealth of the society expressed in both revenue growth and more free time as well as activities of local governments focused on improving the tourist attractiveness of the areas they govern. Both of the above work favours inland shipping, moreover, this state of affairs will continue in the future. The increase in affluence of Polish society is a fact, and its level has already exceeded 50% of the European Union average. Regardless of the inevitable economic fluctuations, this long term trend will continue.

In the Port of Elbląg passenger shipping has always been present and a further growth in this area should be expected in the future. The port also provides a convenient location for wintering as well as technical facilities for inland vessels (shipyard). There is also a sufficient length in mooring berths for these crafts. The current situation will be further improved in the coming years. The footbridges across the Elbląg river in the old town (currently 5.8 m over the water surface) will be modernised and turned into drawbridges. This will create an opportunity for all vessels to use the wharves located in the old city centre, whose height does not exceed 8.5 m (height of bridges on the European Union Route). Thus, port infrastructure in Elbląg does not limit inland navigation, yet the shore services – catering, hotels could be further expanded and a passenger terminal is missing. It is expected that these shortcomings will be obsolete after the proposed revitalization of the Granary Island. Thanks to the existing conditions, inland passenger shipping in the Port of Elbląg may well develop its potential.

The second source of demand for the port's services is maritime shipping. The port may potentially support two ranges of cargo and passenger shipping: shipping between ports of the Vistula Lagoon (Kaliningrad region and Polish ports) as well as short-sea shipping within the Baltic and North Seas and, in case of larger vessels, the Mediterranean as well.

Vistula Lagoon has the status of internal sea waters, not only in Poland but also in the Russian Federation. In terms of safety of navigation, the lagoon waters do not pose the same risk as compared to the open sea. Thus, the shipping of inland vessels is subject to numerous restrictions and requires new equipment (rescue equipment, communications, etc.). The lagoon basin is relatively shallow and its depth increases from the southwest to the northeast. Navigation here is possible only on the designated fairways. Depths of the fairways vary but generally are not below 2.5 m.

Freight between the Ports of Elbląg and Kaliningrad, Baltiysk and Swietly grew very quickly after the opening of shipping in 1990 and in 1997 exceeded 600,000 tonnes. However, it decreased when the Polish government introduced quotas on coal imports and stopped completely from 2005 as a result of another closure of shipping between Elbląg and Russian ports. Passenger traffic developed similarly during this period. In the year 2010 after Russia lifted its ban on shipping, freight showed an increase and, more importantly, structural diversity. It is expected that in 2011 turnover will exceed 200,000 tonnes.


Photo: Port of Elbląg

The growth would be even greater if not for the refusal of relevant authorities to create a phytosanitary check point at the port.

Passenger shipping currently takes place on the Vistula Lagoon, e.g. regular services between Frombork, Tolkmicko and Krynica Morska. For these services the Port of Elbląg is only a base and wintering harbour for ships. Passenger shipping between Elbląg and the harbours of Vistula Lagoon will be possible only after modernization of the fleet. Elbląg's infrastructure is already prepared for launching a ferry service on the Vistula Spit, however, other ports like Kąty Rybackie and Krynica Morska lack adequate facilities.

Shipping to the ports of the Baltic and North Seas is now incidental and very little can be changed in this matter, even the acceptance by Russia of foreign flag vessels, since the conditions of entry into the Russian part of the lagoon are exceptionally restrictive. Regular shipping may develop only after a canal through the Vistula Spit has been constructed. Preparation for the implementation of this project was initiated in 2008. The canal is to be 1,200 m in length, 50-60 m in width and 5 m in depth. Moreover, the length of the lock is 200 m and the width of the lock is 25 m.

Entrance to the canal will be protected by adequate breakwaters. Dimensions of the canal will allow cargo vessels with a capacity of 3,500-4,000 DWT to enter the port and passenger vessels with a length of 120 m and a width up to 22 m. The canal will not only shorten the way to the ports outside the lagoon, it will enable year-round shipping. The decision to break the ice in the fairways in winter will be taken freely by the Polish authorities at the request of commercial carriers and based on a profit and loss calculation. The channel will also allow fuller use of the opportunities connected with the use of larger vessels to and from Russian ports situated in the lagoon area. Finally, existence of the channel is the main prerequisite for comprehensive use of all opportunities that the lagoon brings to Polish and Russian ports.

A promising source of demand for the services of the Port of Elbląg is sailing. Lakes surrounding the port are interesting, and their potential is far from being fully realised.

A direct canal leading to the Baltic Sea by the Vistula Spit will mean integration of the two attractive touristic areas – the Gdańsk Bay and the Vistula Lagoon. An increase in the interest of foreign sailors who have already visited all the ports and harbours at home and in the Baltic should be expected, since the lagoon waters still remain relatively unknown. Therefore, in each of the possible development scenarios of the Port of Elbląg, the needs related to sailing will grow and they should be included in spatial planning and investment programmes. ■

**Professor Krzysztof Luks, PhD**
Elbląg School of Economics

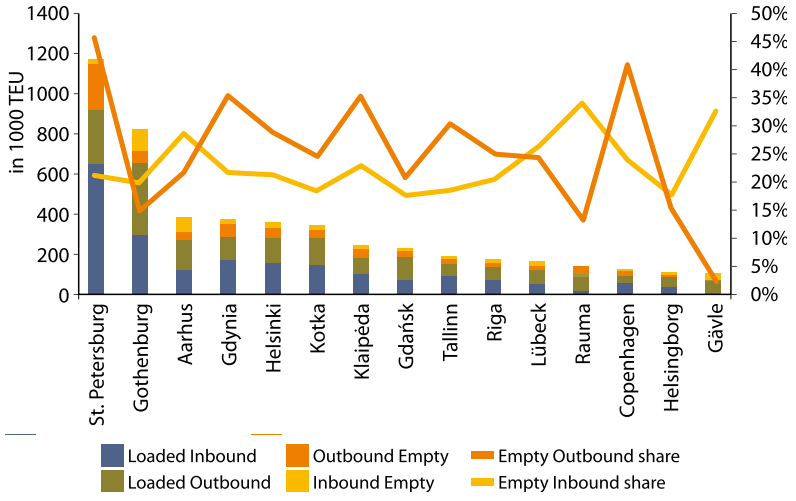
## Empty container management in the BSR – insights from the industry

# A hotspot for empty flows

**The TransBaltic's partner Hamburg University of Technology (TUHH) contributes to the project's ambitions by investigating empty container management in the BSR. In 2010/2011 a survey was conducted aiming to create deeper insight on the impact of empty flows on actors along the container transport chain as well as on potential measures to mitigate its negative consequences.**

The BSR is a hotspot for empty container flows. The share of empty boxes of all containers transported in the BSR (21%-26% between 2005 and 2009) is above global and European average (both around 20% between 2005 and 2009). The highest share of empty containers has been identified on transport routes to Russian Baltic ports (22%-29% between 2005 and 2009). Two major reasons for this have been recognized, namely: the rising trade volume of containerised goods as well as strong imbalances of containerised trade flows. Rising container volumes cause higher absolute numbers of empty containers. In the long run, container flows in the BSR grew above European average. Moreover, many countries and ports in the BSR show large imbalances between inbound and outbound empty container flows. In most cases, the outbound share is larger than the inbound share, i.e. those countries import more containerised goods than they export, hence 'exporting' excess empty containers. Figure 1 shows inbound and outbound empty flows in absolute and relative terms for the Top 15 container ports in the region (data for 2009). Especially Eastern European ports, such as St. Petersburg, Gdynia, Klaipėda and Tallinn report high shares of outbound empty containers. In the case of Russian Baltic ports and European ports handling containers from the Russian market, this is mainly due to the fact that Russian exports are almost exclusively energy resources, i.e. non-containerised goods.

***Fig. 1. Top 15 ports in the BSR with loaded and empty container turnover (2009)***




*Source: author's design based on Eurostat data*

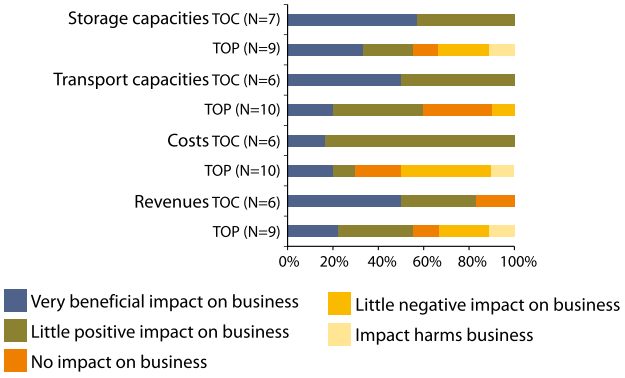
## Who benefits and who doesn't

From a macro perspective, the repositioning of empty containers causes high costs, environmental and socio-economic impacts and ties up transport and storage capacities. However, there are companies for which empty containers constitute a vital part of their business. The answer to the question whether there is a negative or positive impact on business is therefore actor-specific. The survey results concerning the impact of empty containers are presented for two major groups of actors: transport operating companies (TOC) and terminal operators (TOP).

A vast majority of terminal operators stated a positive impact of empty containers on storage capacity. The same applies to about 50% of the transport operators – mainly shipping lines. Around 30% of responding terminal operators in contrast see a negative connection. The overall rather positive picture seems surprising as in recent years particularly sea terminals have suffered from chronic capacity problems due to limited terminal space. A prominent example is the Port of Rotterdam, where in 2007 the ECT Delta Terminal refused to handle empty containers due to congestion problems in the terminal area. However, the survey was conducted when the transport industry still suffered from the world economic crisis, when ports, vessels and hinterland operators were far from operating at full capacity. Obviously, the storage of empty containers was not perceived as distinctively negative during this period. The same argument explains the rather positive view of both groups of actors concerning transport capacities.

In terms of costs and revenues terminal operators stated a very positive influence: here, empties equal profit. For transport operators, the picture is different: around 50% of respondents (mainly shipping lines) stated that there is a negative or even harming impact on their business in terms of costs. Around 30% believe that there is a negative impact of empty containers on revenues. To sum up, the impact of empty container flows is not only actor-specific, but is also highly dependent on the overall economic conditions.

***Fig. 2. Impact of empty containers on respondents' businesses***




*Source: author's design based on the survey results*

## Optimization strategies

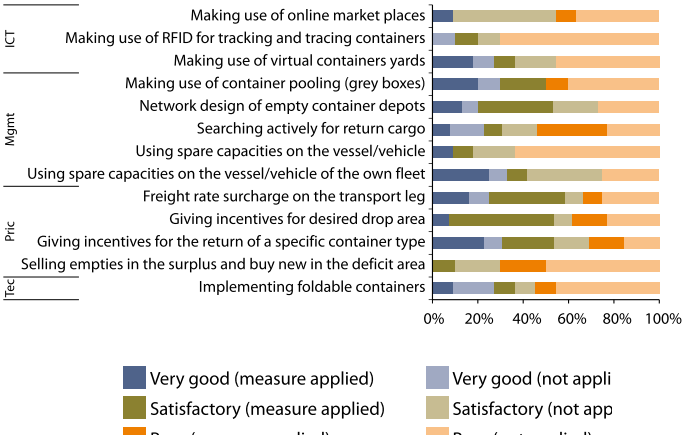
Participants were asked to evaluate different measures to tackle the negative impacts of empty movements. Measures have been clustered into four categories: information and communication technology (ICT), managerial and organisational measures, pricing measures and technological measures. Participants were also asked to indicate whether their evaluation was based on practical experiences (applied/not applied).

Among the ICT measures (online market places, virtual container yard – VCY, and RFID), VCY got the most positive rating. A VCY is an information platform used by consignees and shippers to facilitate direct exchange of empty containers between involved parties to reduce empty runs. By contrast, RFID for track and trace got a rather negative rating.

Included managerial and organisational measures have been: "network design of empty depots", "using spare capacities of own fleet", "container pooling (grey boxes)", "active search for return cargo" and "using spare capacities of other fleet operators". Several managerial measures got a relatively good rating, whereof network design and usage of spare ship capacities of the own fleet were identified as most promising.

Pricing measures comprise incentives for return trips of specific container types, freight rate surcharges on high demand transport legs and selling empties in surplus areas as well as buying in deficit areas. Most pricing measures got a positive rating except for the two latter. The foldable container was presented as a technological measure to reduce empty movements. Ratings were rather inconsistent, some players see potential for application, others do not (see Figure 3).

***Fig. 3. Evaluation of measures***




*Source: author's design based on the survey results*

## Conclusions

The empty container business remains a multi-dimensional issue. Negative impacts on the macro-level are apparent: high costs, negative environmental and socio-economic impacts, tied storage and transport capacities. On an individual firm-level, the situation becomes more complex and depends on a combination of factors including the individual situation of the company, its role in the transport chain and overall industry developments. The evaluation of empty container management strategies showed that no single measure is the panacea. Measures have to be chosen and adopted accordingly to the company's individual situation and general industry and economic developments.

In times of low capacity utilization in the container transport system, problems resulting from empty movements seem to diminish. However, when container turnover increases again and storage and transport capacities are exploited, these problems will be back on the companies' agenda. The players of the container market should now prepare for the expected economic upturn. ■

**Prof. Dr.-Ing. Heike Flämig**
**Dipl.-Ing. Nico Herz**
**Dipl.-Logist. Jutta Wolff**
Hamburg University of Technology, Institute for Transport Planning and Logistics

The article above summarizes the key findings of the TUHH survey and accompanying research. A detailed report can be downloaded from the TransBaltic homepage.