TransBaltic

Towards an integrated transport system in the Baltic Sea Region

Development perspectives for small and medium Baltic Sea ports

on the basis of the TransBaltic and Baltic Ports Organization's seminar "Development perspectives for small and medium Baltic Sea ports" held on 7-8th of June in Elbląg (Poland)

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BPO
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Baltic Ports Organization is made up of forty plus major ports in the nine countries surrounding the Baltic Sea. The main objective of BPO is to improve the competitiveness of maritime transport in the Baltic region by increasing the efficiency of ports, marketing the Baltic region as a strategic logistics centre, improving the infrastructure within the ports and their connections to other modes of transport.

TransBaltic, as one of the few transnational projects so far, has been granted a strategic status by the authorities of the Baltic Sea Region Programme 2007-2013. The overall objective of TransBaltic is to provide regional level incentives for the creation of a comprehensive multimodal transport system in the BSR. This is to be achieved by means of joint transport development measures and jointly implemented business concepts. TransBaltic is led by Region Skåne and lasts from 1 June 2009 to 31 December 2012.

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Introduction

The report has been prepared on the basis of presentations presented at TransBaltic and Baltic Ports Organization's seminar – "Development perspectives for small and medium Baltic Sea ports" held on 7-8th of June in Elbląg (Poland). However, information from other sources also have been used in this report.

Seminar speakers represented e.g. port authorities, external experts and public administration from Poland, Denmark, Finland, Sweden and Germany. The seminar focused on such aspects as small and medium port management, financing tools, good practice dissmination as well as legal issues and platform co-operations. The seminar also intend to investigate perspectives for broader transportation flows through Vistula Lagoon where Port of Elbląg is located.

In the first part of the report the ports' management models were described and some examples were presented. Furthermore, this part deals with the position of the small and the medium ports in the Baltic Sea region.

In the second part of the report case studies were presented. Five small Baltic ports were described, two polish ports – Elbląg and Kołobrzeg, one Finish port - Kalajoki, one Danish port - Naestved and one Swedish port – Oskarshamn. The average throughput of this ports is about several hundred tonnes per year. All of this ports are still developing. Their development plans assume e.g. construction of new quays or modernization of existing ones, construction of new storage area. Apart from small Baltic ports, one German port was presented – Brunsbüttel. Direction of development of this port is mostly connected with offshore sector.

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2. Small and medium size ports in the Baltic

2.1. Port management in EU with the focus on Baltic countries

The analysis presented below discusses port management systems in the Member States of the European Union. However, we deal in more detail with port management in Baltic countries. We have investigated the problem using the documents of the Baltic Ports Organization (BPO), European Sea Ports Organization (ESPO), World Bank and selected references on the subject. Furthermore, we extended our sources by in-depth interviews and discussions with representatives of ports and national port organizations in EU countries.

Basic port management models

Present-day sea port management systems in the EU Member States have developed over the centuries. They are unique in each of the countries. They have been affected by cultural, social and economic processes undergoing in individual European countries. Besides, the functioning of the port sector in a country have depended on a state management form: in countries where the state plays a major role, more centralized port management systems dominate, while in countries with decentralizing tendencies port management is at a lower level as it is handled by regional or local governments.

It tends to be somewhat more difficult to classify port management systems in countries that regained their independence or sovereignty after the fall of Communism such as Estonia, Lithuania, Latvia, Poland, Bulgaria and Romania. These countries introduced legal regulations in the 1990s or in the first decade of 2000 and created central port management systems with some self-governing elements.

Present-day port management systems have emerged out of the three basic models:

- Hanseatic model,
- Latin model,
- Anglo-Saxon model.

The Hanseatic model originated from what is known as the Hanseatic League where trade among Northern Europe countries grew dynamically. With the trade growing, ports and cities developed to form a common social and economic organism. The Latin model which was used to build port management systems has been functioning primarily in the European part of the Mediterranean Sea. It is a centralized system with the role of a central government prevailing. The Anglo-Saxon model was used to create port management boards in the United Kingdom where private ownership in sea port management companies dominates.

Sea port management systems operate based on these models. They “involve all the legal and organizational, administrative, economic and financial, technical and spatial, and social and

environmental relationships that have been established between a management entity (owner) and an object (port business organism)"[1].

Overview of management systems in selected EU sountries

In 2000, Petri[2] reviewed forms of sea port management in the EU countries taking into account public administration (engaged in management) and analyzed port ownership forms. Likewise, ESPO made an in-depth analysis of sea port management[3] in 2005 and 2010. Table 1 shows the results of the investigations.

Table 1: Engagement of public entities in sea port management in EU countries (based on Pietri, 2000, and ESPO, 2005)

Member State	Government level	Port management		
		Govt. direct	Public entity	Private entity
Belgium	Municipal / regional		X	
Cyprus	National		X	
Denmark	Municipal / national	x	X	x
Estonia	National		X	
Finland	Municipal	X	X	x
France	National / regional	x	X	
Germany	Regional / municipal	x	X	x
Greece	National /municipal		X	
Ireland	National		X	x
Italy	National	x	X	
Latvia	National / municipal		X	
Lithuania	National		X	
Malta	National		X	
Netherlands	Municipal / regional / national		X	x
Poland	National / municipal		X	
Portugal	National		X	
Slovenia	National		X	
Spain	National / regional		X	
Sweden	Municipal	x	X	
United Kingdom	National / municipal / regional	x	x	X

Denmark

Denmark has mainly municipal ports which operate as unsepareted or separate entities in the organisational structure of a city, or as companies with cities as their shareholders. In addition, there are companies managing ports in place with shareholders being both private entities and

[1] Grzelakowski A. ,"*European Sea Port Management Systems and Models: Recommendations for Poland*". A report at the Gdańsk Conference on the Management of Large Sea Ports in the Context of Rights of a Local Government, 22 June 2009.
[2] Pietri, J-M. "*L'Etude de l'ESPO sur la 'Situation de fait' dans les principaux ports maritimes européens*". Exposé présenté à la reunion de l'ADPF du 4 Mars 1997 (révisé et complete le 18 Septembre 2000).
[3] ESPO. European Port Governance Report & ESPO. Factual Report on the European Port Sector 2004-2005. 2005 and 2010.

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municipalities (mixed ownership) and private ports. In each of these cases, port management entities have to carry out separate bookkeeping and financial reporting.

Pursuant to the Danish law that governs port activities (the Port Act of 2000), municipal ports are controlled by local municipal councils. Ports are responsible for the extension and maintenance of port infrastructure while private entities carry out operations.
The central government in Denmark does not supervise sea ports.

However, in 2010 the Danish Government initiated the discussion on reforms that focused on the competitiveness and efficiency of the ports in Denmark. The discussion should end up with recommendations to modify the Port Act.

The Danish legislation framework does not distinguish between small and large ports, so the majority of the small ports are owned by municipalities.

Sweden

In Sweden, there are predominantly municipal ports. Sweden does not have any special laws concerning port activities. Port management entities operate under commonly established rules of the Swedish commercial law.

The Swedish port system is unique in the whole of Europe. As opposed to the division into the sphere of management and operations prevailing in Europe, Swedish port management entities carry out operations as well. The idea of integrated ports emerged in Sweden in the 1970s and was initiated predominantly by political factions and local administration. The process of integrating the sphere of management and operations (then private ownership) resulted from the conviction that it would lead to increased efficiency and reduced operating expenses. The process was carried out with the support of trade unions as operating companies often had financial problems, and the integration of activity allowed for cost optimization.

Currently, a reverse trend can be observed, particularly in bigger ports. In March 2009, Ports of Stockholm signed an agreement with Hutchison Port Holdings (one of the largest container port operators in the world) on taking over the activity involving container handling. In future, Hutchison PH will operate in the new port terminal to be built in Nynäshamn (about 60 km from Stockholm). Also, the other operating activities in the port of Stockholm were separated from the management entity. Stockholm Stevedoring and Staffing AB is currently in the process of selling to a private investor. Also, pursuant to the decision of the City Council of Gothenburg, in 2009 Port Göteborg announced that operations would be separated from the port structure. The target Port of Göteborg entity will function as a management board (the Gothenburg Port Authority) and three terminal operators, Älvsborg Ro/ro AB, Gothenburg Car Terminal AB and Skandia Container Terminal AB. Operators' companies will be sold to private investors. Thus, we can assume that the two ports as well as the Port of Malmö operate as land-lord ports.

Finland

Like in other Scandinavian countries, Finland ports are governed by cities. They have the land-lord[4] port status. Beside municipal ports, there are also private ports handling industrial activities located near the port (most often, refining and timber industries). The majority of ports are integrated with the municipal administration; some of them form separated local entities that manage their own financial reporting. However, a process of separating port activities from

[4] Hilska Lassi. "*Port Legislation and Cooperation between Authorities*". A Report at the Northern Maritime Challenge. Helsinki, Finland. 2010,

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municipal administration and setting up commercial law companies with cities as shareholders has been observed recently.

This is caused by the 2007 decision of European Commission on state aid rules in Finnish public enterprises. As a consequence, Finnish port authorities must be corporatized by the beginning of 2014. This entails a series of consequences for small ports as well that will have to finance development projects at their own risk and using their own resources.

Estonia

Pursuant to the laws of Estonia, public, municipal and private ports alike can operate in the country. Port management entities function as commercial law companies in accordance with commonly applicable regulations. Under the Estonian law that governs port activities, a port management board has land within its borders and organizes as well as manages port activities; in particular it maintains port infrastructure, port canals and navigational markings, and supervises safety and environmental protection in the port.

The largest port in Estonia, the Port of Tallinn, manages several ports in the country such as the port in Tallinn, the port in Muuga and the port in Paldiski. The 100% owner of the Port of Tallinn is the central government, while direct supervision is carried out by the Ministry of Economy and Communications. The port management board can be a shareholder or can establish affiliates both in the country and abroad.

An example of a private port is Port of Sillamäe (a commercial name of Silport). It is located very close to the border with Russia. It has several terminals for handling general cargo and bulk cargo.

Lithuania

Klaipeda is a strategic port for the economy of Lithuania. The Klaipeda State Seaport Authority operates under a special law governing the port activities of 1996. The Port of Klaipeda operates according to the land-lord model. Furthermore, the Ministry of Transport and Communications accepted a regulation governing the operations and rules of port navigation in the Port of Klaipeda. The Minister of Transport and Communications appoints and recalls a port director and approves financial statements. The Port Council (there are no supervisory functions) that prepares development plans for the port is composed of representatives of the Ministry of Transport and Communications, the Ministry of Finance, the region and the city of Klaipeda, port management board and users.

Also, the port structure includes the Port Development Council that prepares the development strategy of the port and coordinates the relations among the management entity, municipal administration in Klaipeda and governmental institutions. The Port Development Council is composed of representatives of the Ministry of Transport and Communications, the Ministry of Finance and other ministries, the region and the city of Klaipeda, academic representatives, port management board and users.

Latvia

The ports in Latvia operate pursuant to the port act of 1994 that makes them public institutions. Port management boards are non-profit institutions that have the land-lord status: they manage infrastructure while private companies deal with operations. Moreover, the activities of the Port of Riga are provided for by the Act on the Free Port of Riga of 2001, while of the Port of Venstpils, by the Act on the Free Port of Ventspils of 1997.

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A body managing the Port of Riga (the Free Port of Riga Authority) was formed by the Municipal Council of Riga and it is supervised by the government of Latvia. The Supervisory Board of the Free Port of Riga Authority is composed of city representatives (4 members) and the representatives of the ministries of transport, finance, environment and economy (4 members as well).

Germany

In Germany, there are many ownership forms relating to port management entities, from private ports to ports managed by states and cities, and mixed forms.

Below we present a few examples of port management entities in Germany.

Bremenports GmbH &Co. KG is a company formed in 2001 where the 100% owner is the Free Hanseatic City of Bremen. The city of Bremen has a status of a state. Bremenports GmbH & Co. KG manages ports in Bremen and Bremenhaven.

In 2005, the state of Lower Saxony formed a company, Niedersachsen Ports GmbH & Co. KG to manage ports located along the coast of the state. Lower Saxony holds 100% of shares in the company.

In 2005, a city and a state of Hamburg separated all administrative functions managing the port from the municipal structures and formed the Port Hamburg Authority to manage the Port of Hamburg. As opposed to the other port managing authorities presented above, the Port Hamburg Authority is not a company under commercial law but it is a public entity (it was formed under public law), although it has some features of a commercial entity, e.g. it collects fees for land lease.

The ports in Rostock, Wismar, Sassnitz and Mukran located in Mecklenburg-Vorpommern are managed by commercial law companies with shareholders being the state of Mecklenburg-Vorpommern and the cities. For instance, the city of Rostock holds 74.9% shares and Mecklenburg-Vorpommern 25.1% in the entity managing the Port of Rostock, Hafen-Entwicklungsgesellschaft Rostock mbH.

Small German ports are predominantly supervised by cities.

Poland

In Poland, the Act on Seaports and Marinas of 1996 provides for the framework of port activities. The Act was used to establish port authorities for major ports accelerating state economy such as Ports of Gdańsk, Gdynia and Szczecin-Świnoujście. Since its promulgation, the act was amended a few times.

Under the Act, the ownership of small ports had to be transferred to the city, but only in a few cases (Kołobrzeg, Darłowo, Hel and Elbląg) the process turned to be successful. The other small ports are under administrative control of the maritime office or still included in the state-owned enterprise (Władysławowo).

Summary

Much diversified forms of sea port management are found across the European Union. However, private ownership dominates while quite frequently mixed management forms occur if the state and local and regional governments exert some influence. Countries where local administration engages in port management are in Scandinavia. Local and regional administration engages primarily in

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countries where the Hanseatic management model prevails, that is, in Germany, Belgium and the Netherlands. Also, in countries with a central management model such as France and Spain the participation of local governments is considerable, particularly in small ports. In recent years, decentralization processes in port management (Belgium and France) and a stronger engagement in management functions by local and regional governments have been observed. In most countries, small sea ports are supervised by local governments.

Another important trend noted in EU is that public entities are separated from local governments e.g. the Port Hamburg Authority, or commercial law companies are formed to manage ports. The process is named corporatization[5] in specialist literature. Its aim is to give greater autonomy to managing entities (to join business projects as well) which increases equality and efficiency in dealing with customers and investors. Obviously, the original reason behind corporatization of ports is globalization processes and the greater and greater competition which force ports to use more business-quality standards in their management. Port management boards have to have a greater capability of being an active business player.

The European Union has no directives or regulations whatsoever governing sea port management. Two attempts to pass what was called as the Port Package to govern the services inside the port ended in a fiasco due to protests of trade unions. However, a prevailing philosophy in port management in Europe relies on a land-lord port model.

2.2. Market position of small and medium Baltic ports

There are over 200 ports in the Baltic Sea. If only those ports that handle minimum 50 000 tonnes of cargo per year, and where at least part of this cargo is international, are taken into account the number of ports reaches approximately 190. All Baltic Sea ports handle over 800 million tonnes of cargo annually. Baltic ports can be divided into four classes in terms of their total traffic volumes. There are about 20 big ports. Each handles over 10 million tonnes annually. They participate in 64 % of total cargo turnover of all Baltic sea ports. Ports in the size class 5 -9.99 million tonnes participate in 15 % of total cargo turnover. Ports' in class 2-4.99 million tonnes share in total cargo turnover is about 11 %. About 66 % of all Baltic sea ports are small ports which handles less than 2 million tonnes of cargo per year. However, their share in total cargo turnover of Baltic ports is only about 10 %.[6] The greatest number of small ports (0.05-1.99 million tonnes) where at least part of this cargo is international is in Sweden (about 44), Denmark (about 37) and Finland (about 27).

[5] Verhoeven, P. *"European Ports Policy: Meeting Contemporary Governance Challenges, Maritime Policy & Management"*. 2009. 36:1, 79-101; Verhoeven, P. "*Port Management Reform in Europe: Is There a Role for the EU?*". 2007

[6] *Baltic Port List* 2008.

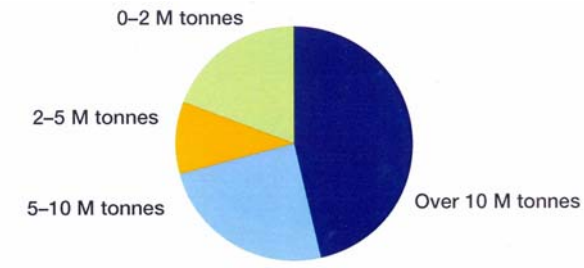
Table 2: Ports grouped into four size classes in terms of their total traffic volumes

Size classes	Share in total number of ports	Share in cargo volumes
Over 10 million tonnes	**11 %**	**64 %**
5-9.99 million tonnes	**9 %**	**15 %**
2-4.99 million tonnes	**14 %**	**11%**
0.05-1.99 million tonnes	**66 %**	**10 %**

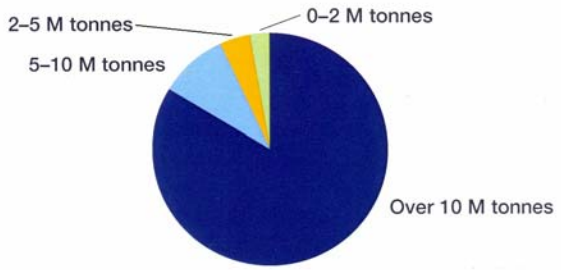
Source: *Baltic Ports List 2008*

Many of Baltic small sea ports can handle various kind of cargo: dry bulk, liquid bulk, general cargo and containers. However, generally, dry bulk cargo plays a most important role in majority of small Baltic ports. The comparison of four port groups' share in four cargo handling groups (dry bulk, liquid bulk, other dry cargo, containers) shows that the largest share of small ports is related to dry bulk traffic (Figure 1). Among the dry bulk cargo handled by Baltic sea ports are: coal, grain, building materials, sand, breakstone etc. Moreover, many small Baltic ports are specialized in handling some types of cargo. For example some Finish ports are dedicated to timber cargo. Many small Baltic ports have also infrastructure to handle passenger and tourist traffic.

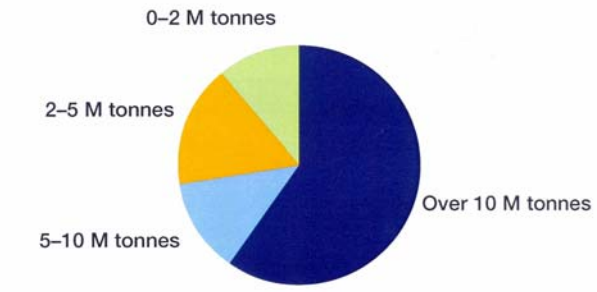
Each port group share of dry bulk traffic



Each port group share of liquid bulk traffic



Each port group share of other dry cargo traffic



Each port group share of container traffic

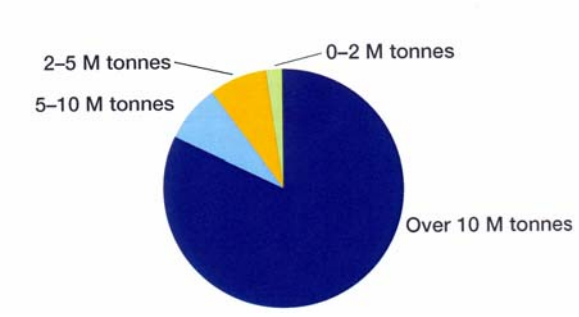


Figure 1. Each port group share of international dry bulk, liquid bulk, other dry bulk and container traffic. Ports are grouped into four size classes in terms of their total traffic volumes.

Source: *Baltic Port List 2008*

3. Case studies

Case studies cover five small Baltic ports: two polish ports – Elbląg and Kołobrzeg, one Finish port - Kalajoki, one Danish port - Naestved and one Swedish port – Oskarshamn. The average throughput of these ports is about several hundred tonnes per year. These ports can handle various kinds of cargo, however, generally, they are specialized in dry bulk cargo and general cargo handling. Moreover, in some of this ports, tourist traffic also plays an important role. All of this ports are still developing. Their development plans assume e.g. construction of new, quays or modernization of existing ones, construction of new storage area. Moreover their development is strictly connected with the development of the port city and the region. Apart from small Baltic ports, one German port was presented – Brunsbüttel. Direction of development of this port is mostly connected with offshore sector.

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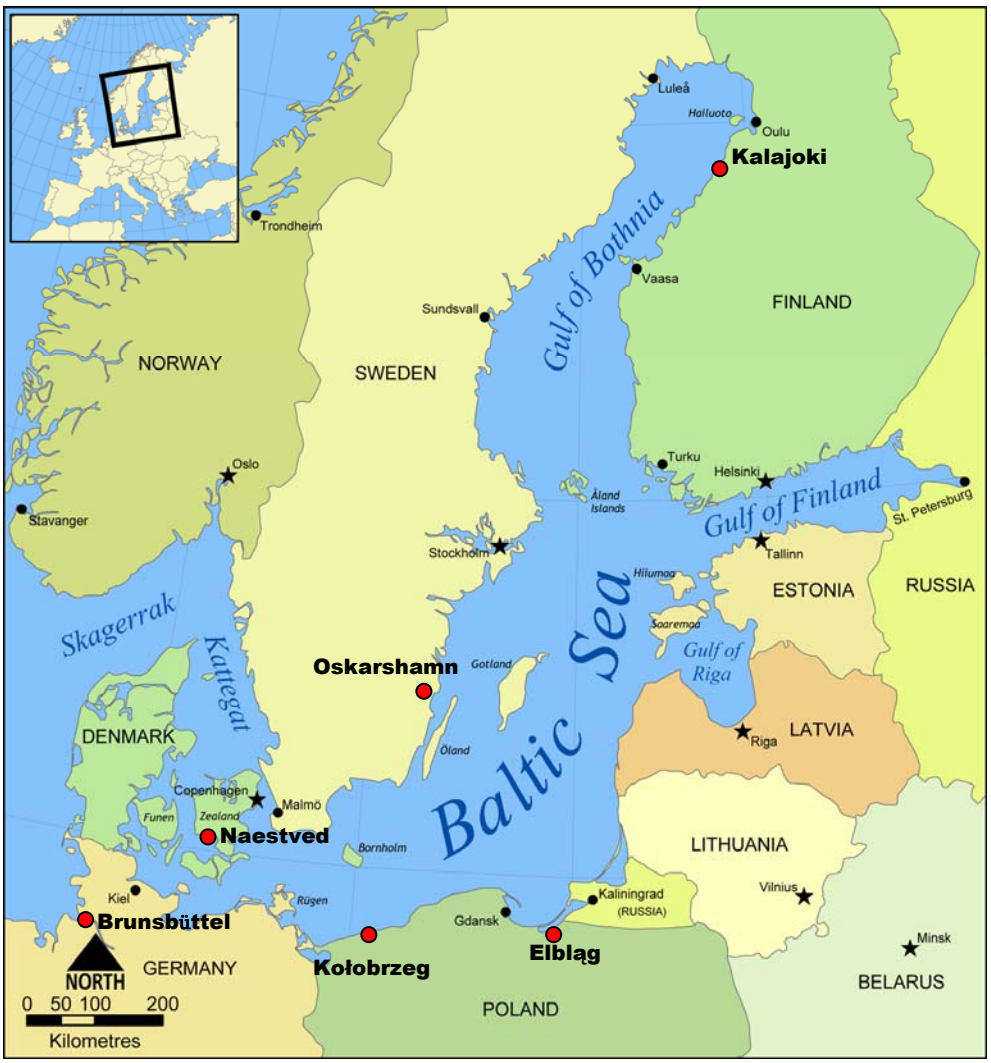

Figure 2. Localization of Port of Elbląg, Port of Kołobrzeg, Port of Kalajoki, Port of Naestved, Port of Oskarshamn and Port of Brunsbüttel

3.1. Port of Elbląg

General information

Port of Elbląg is located on the river Elbląg, 6 km from its estuary to The Vistula Lagoon . The Vistula Lagoon is connected with The Gulf of Gdańsk by inland navigation along the river Szkarpawa and by Pilawa Strait near Baltiysk.

Port of Elbląg covers an area of 327.7 ha (city grounds - 219 ha, national grounds -74.7 ha, private grounds - 34 ha). The total quay length is 2.5 km and the depth of fairway is 3.0 km. Port is equipped with siding, overhead crane (150 tonnes), cereal elevator (capacity - 14 thou. m^3), turntable for ships (length -120 m). There is 5 dock and 5 marinas and repair shipyard.

Port handles both cargo and passenger traffic. Multipurpose cargo terminal covers an area of 5.0 ha, including 3.1 ha of storage area. The annual handling capacity is about 1 million tonnes. It mailny

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serve a cargo which is importet from or exported to ports of the Kaliningrad District (Kaliningrad, Bałtijsk, Swietły. Terminal serves such cargo as:

- Bulk cargo (coal, building materials, sand, breakstone) – handling capacity : about 600000 tonnes per year
- Conventional general cargo, including goods in containers and in packets (sacks, chests etc.) – handling capacity: about 150000 tonnes per year
- Containers (20- and 40-foot)
- Heavy pieces

The length of the berth is 196 m. Terminal can accommodate ships up to 85 meters long and 15 meters wide with a maximum draft of 2.3 meters and capacity up to 1500 tons. Stacking yard for containers (20- and 40-foot) has an one-layer capacity of approx. 100 items. There is possibility of storing the reefer containers and the over-size constructions. Terminal is equipped with bunker for dry goods (coal, building materials etc.). This bunker is divided for three sections: I – 7 600 tonnes, II – 4 300 tonnes, III – 4 400 tonnes . The warehouse is designed for storing general cargo in pallets, in packets or in stacks. It's area is 1440 m2. The warehouse capacity is equal to 3300 tonnes. There is also roof station (1440 m^2) for storing general cargo, reloading equipment, empty pallets. On the area of terminal there may be organised various activities: storing, sorting, purifying, packing etc., forming and unforming the containers, warehouses and customs stock areas, cold stores, parking places during the transit etc.

Passenger and ferry terminal serves passenger ferries, as well as passenger and car ferries (cars and delivery vans), passenger ships and sport units. Terminal can accommodate ships up to 65 meters long and 12 meters wide with a maximum draft of 2.5 m. Simultaneously there may be served 200 people and 30 cars. On the area of terminal there is a possibility of water supply, collection of sewage and communal waste. The following international shipping route are available: Elbląg – Kaliningrad, Elbląg – Baltiysk. Moreover there are cruises connection between Elbląg and ports of the Vistula Lagoon (Frombork, Tolkmicko, Krynica Morska, Kąty Rybackie) , ports of Gdańsk urban area and Masurian lakes.

Figure 3. Port of Elbląg
Source: *Elbląg Sea Port in a nutshell - current condition and plans for the future* - presentation, Arkadiusz Zgliński, 2011

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Development plans

Development plans of Port of Elbląg assumes: strenghtening of cooperation with Kaliningrad Region, especially in the area of cargo increase, reactivation of passenger and tourism traffic, creation of new cargo terminals and depots, adaptation of water transportation means to container and oil freight, organization of common sailing races and yacht camps, organization of educational cruises and youth exchange.

One of the factors that may influence further development of the Port of Elbląg is the planned construction of canal across the Vistula Spit which connect Vistula Lagoon with the Baltic Sea. Pilawa Strait which belongs to Russia is the only one sea connection between Elbląg Sea Port and The Gulf of Gdańsk. The canal across the Vistula Spit will give the port of Elbląg direct access to the sea. Canal is planned to be 1200 meters long, 50 -60 meters wide and 5 meters deep. The lock is going to be 200 meters long, 25 wide and 5 meters deep. The entrance to the canal will be sheltered by the breakwaters. The realization of the project is planned for 2013-2019. After finishing the investment Port of Elbląg will be capable of receiving cargo ships up to 3.5-4 thou. DWT and passenger ships up to 120 meters long and 22 meters wide. It is assumed that after the year 2020 the total annual throughput of the port will reach 3.5 million tonnes.

Among the other factors that may have impact on further developments of Port of Elbląg are: obtaining a permit for unrestricted freight by Russian Federation (including third flags), Common development policy on both bay sides, EU decisions regarding small border traffic (zone widening , visa abolition), cooperation of Elbląg council with port in relation to gaining new land for building new terminals, dry cargos, and getting EU financial support, development of cooperation with neighbouring ports in Gdansk and Gdynia (Port of Elbląg as satelite port), establishment of border veterinary station.

3.2. Port of Kołobrzeg

Port of Kołobrzeg is situated on the east bank of the *Parsęta* river at estuary into the Baltic.The administrative boundaries of the port cover an area of 58.52 ha. The area of 16.04 ha is under the administration of Kołobrzeg Sea Port Authority. Port of Kołobrzeg consists of fishery harbour, yacht harbour and cargo harbour. Port is also available for passenger traffic. The total quay length is 4,9 km metres. Port has two turning basins, 6 wet dock, a yacht pier, a repair yard, a 4 901 m^2 general cargo depot, 28 650 m^2 of storage space, 17 316 m^2 of unhardened storage space, an ice plant and a fish – processing plant with a 230 tonne daily turnout.

The cargo harbour in Kołobrzeg has a regional character. It mainly handles dry bulk cargo and general cargo. The total annual throughput is about 100 000 tonnes. It is equipped with a 5 – and 16 tonne mobile cranes, grain elevators (total capacity 5 905 tonnes). After the rebuilding of the port entrance, harbour can accommodate vessels up to 100 metres in length, 20 meters in width and 5 metres in draught (up to 3 000 DWT). The rebuilding works involved widening the port entrance from 40 m to 80 m. Works were officially finished in December 2010, cost of the investment was 144.5 million Zloty.

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The yacht harbour covers an area of 2.7 ha, the total quay length is 803.4 m. The toilets, showers, electricity, water, mechanical workshop, yacht shop, slip and a lift, yacht hangar (300 m2) are available at the harbour.

The fishery harbour in Kołobrzeg is the largest in Poland. It has four quay (total length of 691.7 m) and one wooden pier (length of 121 m). In 2006 -2008 modernization works in the port were carried out. The warehouses, ice plant, fish sales centre were constructed. The cost of the investment was 44.7 million Zloty.

Development projects

Over the past several years, many development project have been carried out in the Port of Kołobrzeg. Some of them were mentioned above. Another projects involved modernization of tourist infrastructure at Pilotowe Quay, modernization of electrical installations in fishery harbour, equipping port with monitoring system and new energy- efficient lighting system.

Currently several other development projects are being carried out. One of the project involves modernization of yacht harbour. Project consists of several activities: construction of yacht club building, roads, parking and additional pier (60 m) as well as sanitary and electrical installation. The cost of the investment is estimated at 11.8 million Zloty. Construction works are scheduled to be finished in September 2011. Another project involves the rebuilding of wooden pier in the fishery harbour. The cost of the investment is estimated at 1.4 million Zloty. Works are scheduled to be finished in October 2011. Moreover the Remontowe Quay in fishery port will be equipped with crane (arm- 6m), gantry crane (45 ton) and other facilities. The cost of this investment is 1.2 million Zloty. The last project involves installation of three wind turbine generating energy power and 10 lamps energized by wind and solar energy. The cost of the investment is 1.1 million Zloty. Mentioned project are scheduled to be accomplished in 2011.

Figure 4. The visualization of yacht port in Kołobrzeg
Source: *Port of Kołobrzeg* – presentation, 2011

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3.3. Port of Kalajoki (Finland)

General information and development plans

The Port of Kalajoki is located by the Gulf of Bothnia. Development of the port, in its' present location, began in the late 1950's and for the last 40 years the port has been vigourously improved. Kalajoki town owns most of the harbour area and facilities and has leased them to the companies operating in the port. Harbour covers an area of approximately 32 ha, however, additional area of 17 ha is available for further development . The depth of the fairway and the port basin is 8.5 metres. The length of the quay is 415 metres. Port can accommodate 3 vessels at one time. There is 30 000 m^2 of covered storage area available at the port. Warehouses are available for example for feed, grain, pulp, wood pellets and raw minerals.

There are about 100 vessels visiting the port annually. The port's throughput is approximately 300 000 – 350 000 tonnes per year. 80 % of the traffic from the Port of Kalajoki is export. Sawn timber is the main export product of the port and every year 400 000 m^3 is shipped from Kalajoki. 60 saw mill companies and 10 – 20 other industrial companies from Northern-, Eastern- and Mid Finland are the clients of the port. Sawn timber products are mainly exported to England, Spain and Mediterranean countries. In addition to sawn timber products plywood, steel components, scrap iron, milled white peat, grain and wood pellets are exported from Port of Kalajoki. The main import products are: raw minerals used in the pulp- and paper industry, slag, tile industry minerals and different types of botanical material used in the feed industry.

The Port of Kalajoki is currently employing 80 people of which 55 are working for Rahjan Huolinta - forwarding company. In addition the Port of Kalajoki indirectly employs a number of people working for transportation- and maintenance services.

Over the past several years some investments were carried out in the port of Kalajoki. One of the investment involved construction of new warehouse for bulk cargo. The overall estimated cost was 350 000 Euro. Further development plans assumes deepening of the port's basin to 10 m and construction of new 70 m log quay .

Figure 5. Port of Kalajoki
Source: http://www.portofkalajoki.fi/aerialphotos.php

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3.4. Port of Naestved (Denmark)

General information

Port of Naestved is situated near Oresund, Great Belt and Fehmarnbelt. It was established in 1938, when a oirt canal was dug through to the city of Naestved. Since then the port has developed into the modern port.

The port offer 24 –hour service. The depth of the fairway and the port basin is 6 metres. The total quay length is 1.3 km. Port can handle ships up to 119 meters in length, 12.2 meters in width and with a draught of up to 5.6 meters. Vessels with a length (LOA) of 55 metres or more shall use a pilot when arriving at or departing from Port of Næstved along the dredged fairway in Karrebæk Fjord. Tugs are recommended for vessels with drafts greater than 5 m and / or length of 100 m.

Port of Naestved handles about 500 000 tonnes of cargo per year. It offers storage of many kinds of bulk materials. It mainly handles wood, wood pellets, grain, shards of glass, stones, sand, crushed stone, fertilizers, raw materials. There are 3 warehaouses of total area of 7 000 m2, a grain silo, a mineral silo, a tank for animal oil and a tank for mineral oil. Port is equipped with 3 cranes (one -3 tonnes, two – 4 tonnes) and one mobile crane (40 tonnes). There is also a workshops for ship's repairs.

The customers of the port are small and large national and international companies. Port has 12 employees: three in administration, five crane operators/dock workers and four bridge watchmen.

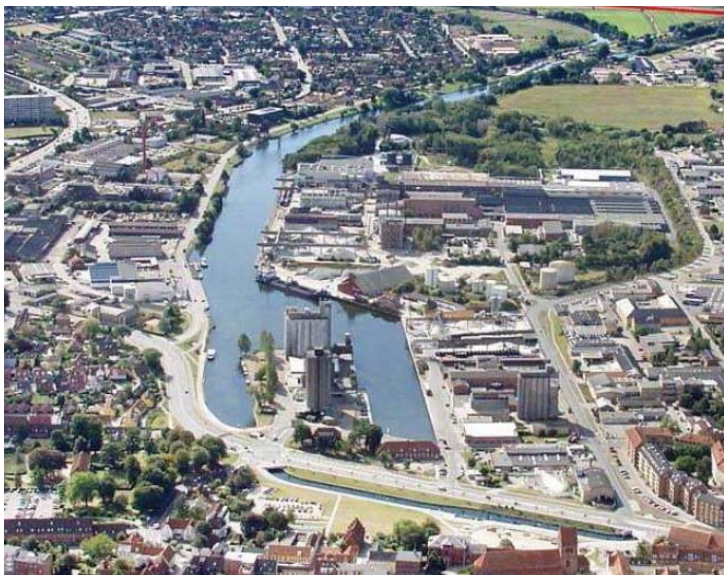

Figure 6. Port of Naestved
Source: *Port of Naestved - How did we succed in develpment and management of a small port in Denmark?* -presentation, 2011

3.5. Port of Oskarshamn (Sweden)

General information

Oskarshamns Hamn AB is situated in the middle of south Sweden's east coast in a forest-rich region. From Oskarshamn, the large consumption areas around lake Mälaren, Gothenburg and Malmö/Copenhagen can be reached.

Port of Oskarshamn is a regional port, supported by regional organisations and municipalities of Kalmar and Jonkoping. Port covers an area of 50 ha. The depth of the fairway is 11 -13 metres. The total quay length is 2.3 km and the maximum depth along the quay is 10.7 meters. Towing and icebreaking services are offered by Oskarshamns Hamn AB's two tug boats.

The port's throughput is over one million tonnes of cargo per year. Port handles most types of goods: containers, dry bulk cargo and wet bulk cargo. Port of Oskarshamn is one of the Sweden's largest ports for sawn timber. Port handles also such bulk cargo as: slat, pellets, aluminium hydroxide, gravel products and fragmented scrap. Moreover, import of liquids and chemicals takes place via Oskarshamn. There are also regular container routes between Oskarshamn and Hamburg/Bremerhaven and Great Britain. Basic services of the container terminal include stuffing and stripping, loading and unloading of containers to and from ships, rail and road transport, goods handling services on quayside or terminal. The handling capacity of the terminal is 10 000 TEU.

The clients of the port are regional industries. Port also serves goods transport to and from North Sea, The Mediterranean Sea, North Africa, Asia and east coast of north America. Port is equipped with 7.5 - 100 ton cranes that can handle all kinds of cargo like containers, cut wooden goods and scrap-metal, 45 different trucks from 4 - 45 tons and 3 ro-ro ramps. The warehouses covers an area of 44 000 m2. The port has a workshop, where maintenance and repairs cranes, trucks and other machinery is performed.

Oskarshamn handles also a passenger traffic. From the port there is ferry services to Gotland. In the summer half-year ferry services is also available to Byxelkrok on Öland, with several daily departures from the inner port of Oskarsham.

Figure 7. Port of Oskarshamn
Source: http://www.watski2star.se/2011/oskarshamn/oskarshamn_11.asp

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Development plans

Port is involved in the project CARGOTO. CARGOTO is a collaboration project set up to extend the freight transport options for companies in Smaland (Sweden). CARGOTO's partners are: Oskarshamns Hamn AB, LogPoint South Sweden, Högland Terminal, Oskarshamn Municipality, Nässjö Municipality, Sävsjö Municipality, and the regional councils in Kalmar and Jönköping Counties. The joint aim is to create a new and effective freight transport route from Jonkoping, Nassjo and Oskarshamn via port of Ventspils to Russia and Far Eest. Using the CARGOTO freight route from/to the logistic sites in Jönköping via Swedish port Oskarshamn and port Ventspils Latvia from/ to Moscow - the total transport cost can be reduced by 20 % and the lead time shortened to 65 hours - compared with route solutions now offered to trade and industry in the Småland region. It is belived that route will start functioning in 2012.[7]

The example of a major investment is restructuring of the port basin in the Port of Oskarshamn. Works are scheduled to start in 2012 and be completed in 2017. The development plans assumes also a construction of a new ferry terminal (Baltic Terminal), which is planned to be put into operation in January 2015.

3.6. Ports of Brunsbüttel

General information

Group of ports at Brunsbüttel consists of three ports: Elbehafen, Port of Ostermoor, Oilport. Ports are located at the lower Elbe and at the Kiel-Canal which enables direct access to North and Baltic Sea as well as to the European inland waterways. Brunsbüttel Ports GmbH is 100% owner and operator of the infrastructure and superstructure of the ports.

Figure 8. Map of Ports of Brunsbüttel
Source: *Hafenkooperation Offshore-Häfen Nordsee SH - new chances for small and medium sized ports through cooperation* - presentation, Carsten Lorleberg , 2011

[7] http://www.cargoto.se/en/

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The Elbehafen is located at the lower Elbe. It is a multipurpose port, it handles bulk cargo, dry cargo and containers. Port covers an area of 10 ha. The total quay length is 1.1 km. Port can accommodate ships up to 350 meters in length, 55 meters in width and with a draught of up to 14 meters. The containers storage capacity is 2000 TEU. Port is equipped with 4 cranes (capacity from 24 to 120 tonnes), 2 Reachstacker up to 45 tonnes lifting capacity, crane with top spreader up to 40 t single pieces with lashing and fixing points, port mobile crane with up to 20 onnest lifting capacity, 2 mobile dredgers with up to 19.5 m outreach, 7 fork lift trucks with up to 30 tonnes lifting capacity, 6 wheel loaders with 11 m^3 grab, 2 truck scales (up to 60 tonnes, automatic weighing).

The port of Ostermoor is located at the Southern part of Kiel-Canal. The port was built in 1975 as supply and disposal facility for the nearby industry. The handling facilities for ammonia, urea, crude oil and various liquid chemicals are factory-owned and located on port areas which are leased from Brunsbüttel Ports GmbH. Port can accommodate ships up to 32 meters in width and with a draught of up to 10.4 meters.

The Oilport is also located at the Southern part of Kiel-Canal. Port handles various liquid refinery products (crude oil, chemicals, other mineral oil products). It cover an area of 6 ha. Port can accommodate ships up to 235 meters in length, 27 meters in width and with a draught of up to 10.4 meters.

Cooperation for the economical strengthening of a whole region

Brunsbuttel is among the five seaports located at the Unterelbe – Cuxhaven, Brunsbüttel, Glückstadt, Stade und Hamburg – which agreed to cooperate with the aim to strengthen their competitiveness. The cooperation focuses on:exchange of information, area management for industrial locations, operational collaboration, green logistics, common marketing, traffic infrastructure, nautical issues, approval management.

Cooperation of Offshore-Ports North Sea Schleswig-Holstein

The ports of Brunsbüttel, Büsum, Dagebüll, Helgoland, Husum, Hörnum, List, Rendsburg-Osterrönfeld and Wyk auf Föhr cooperate for the purpose of offering an overall maritime service to the offshoremwind farm operators with regards to installation and servicing of the wind farms. The cooperation puts its focus on „production, logistics and service ports for offshore windfarms“.

31 wind power stations are in operation in the German North Sea. about 5 960 wind power stations are planned and about 1 750 wind power stations are approved. A logistical supply chain is necessary for installation, operation and servicing of the offshore wind farms. Sea ports are an important element within the supply chain and they must be prepared for the future demands, fulfilling various functions.

In port of Brunsbüttel and Rendsburg-Osterrönfeld (heavy lift capable deep water ports) the components of the wind power stations can be stored and pre- installed before they are shipped to

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the offshore wind farms with suitable transport barges. Furthermore the ports of Büsum, Husum and Brunsbüttel can act as servicing ports for the immediate supply port which are located short distance from wind farms.

In 2010 a study, ordered by Brunsbüttel Ports and egeb Wirtschaftsförderung at Universal Transport Consulting GmbH (Uniconsult), proved the potentials of the location Brunsbüttel within the offshore wind energy cluster. Development plans of the port assumes construction of new, heavy lift capable port and storage areas as well as the relating facilities especially for handling wind power stations components.

4. Summary

Much diversified forms of sea port management are found across the European Union. In Sweden, Denmark and Finland there are predominantly municipal ports. Such countries as Estonia, Lithuania, Latvia, Poland, Bulgaria and Romania created central port management systems with some self-governing elements. Local and regional administration engages primarily in countries where the Hanseatic management model prevails, that is, in Germany, Belgium and the Netherlands. In most countries, small sea ports are supervised by local governments.

About 66 % of all Baltic sea ports are small ports which handles less than 2 million tonnes of cargo per year. However, their share in total cargo turnover of Baltic ports is only about 10 %. Generally, dry bulk cargo plays a most important role in majority of small Baltic ports. Moreover, many small Baltic ports are specialized in handling some types of cargo. For example some Finish ports are dedicated to timber cargo. In some of this ports, tourist traffic also plays an important role.

Every small port has its own strategy for development. Generally, they are focused on the specialized market area. Their development is strictly connected with the development of the port city and the region. In many cases small ports' co-operation with the local and regional buissneses is essential for their development. Some ports are involved in local or regional projects and co – operate with other ports and municipalities in order to strenghten their position. For example port of Brunsbüttel cooparate with several other ports for the purpose of offering an overall maritime service to the offshoremwind farm operators with regards to installation and servicing of the wind farms.

Furthure development of small and medium Baltic ports depends on many, often specific for particular port, factors. However, financing of the port development is one of a key issue as very often the small ports are not able to secure the financing for their development by their own.

5. Recommendations

Every small port has its own strategy for development as they depends on many local or specific factors, therefore it is difficult to formulate universal recommendations for development of the small ports. However, based on the discussion during the Seminar as well as taking in to account presented report the following recommendations would be formulated:

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- Small ports in their development strategies should focus on the specialized market area (market niche)

- Small ports should also very closely co-operate with the local or regional businesses in order to attract the cargo for the port. The owner-ship between the public sector (municipality) and the private (production, trading) should be also considered.

- Small ports should also look for the strategic partnership or alliances, either with the larger ports or with the other ports in the region to offer more complex products.

- Financing of the port development is a key issue for the small ports. Very often the small ports are not able to secure the financing for their development by their own. Public institutions (city, state) should co-ordinate the infrastructure development with the ports. Furthermore, the PPP model should be applied.

- Similarly to the larger ports, small port should also act toward local community with the proper communication policy in order to show the value of the port for the surrounding community and to secure the future development plans.

- Small ports are often neglected by the policy makers on the EU, regional or even country level as it is a very fragmented market (but still with significant market position). It is recommended that national port organizations from the Baltic region and the Baltic Ports Organization would initiate the project focused on the exchange of know-how and experience between the larger ports and small port sector as well as on the market strategies and development of small ports.

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