

Master's thesis



Local effects of small port expansion and
consequent changes in port-town relationship.

The case of Salacgriva, Latvia

Liene Tiesnese

Advisor: Miaoja Liu

University of Akureyri
Faculty of Business and Science
University Centre of the Westfjords
Master of Resource Management: Coastal and Marine Management
Ísafjörður, February 2012

Supervisory Committee

Advisor:

Miaojia Liu, Dr.

External reader:

Program Director:

Dagný Arnarsdóttir, MSc.

Liene Tiesnese

*Local effects of small port expansion and consequent changes in port-town relationship.
The case of Salacgriva, Latvia.*

45 ECTS thesis submitted in partial fulfillment of a Master of Resource Management degree in Coastal and Marine Management at the University Centre of the Westfjords, Suðurgata 12, 400 Ísafjörður, Iceland

Degree accredited by the University of Akureyri, Faculty of Business and Science, Borgir, 600 Akureyri, Iceland

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Printing: University Centre of the Westfjords

June 2012

Declaration

I hereby confirm that I am the sole author of this thesis and it is a product of my own academic research.

Liene Tiesnese

Abstract

The permanent pressure on world's ports to increase their capacity through more efficient and less labor-intensive equipment reduces the positive impact ports used to have in the local settlements. This research is formed as a case study of a small regional port of Latvia, Salacgriva, and the problem looked upon in this study deals with small port-town relationship issues. Through global port development trends and potentials, the role of Salacgriva port is revealed. The main goal of this research is to describe changes that small port expansion would introduce in port-town relationship in the selected case in times when urbanization of port territories and waterfront is globally widespread. The concept of functional beauty is revealed as an opportunity for more successful future port-town integration.

Dedication to determination

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Acknowledgements

I thank my thesis advisor Miaoqia Liu for agreeing to supervise this research and Salacgriva port authority officials and interviewees for the successful cooperation. I highly appreciate the unique academic and life experience that the University Centre of the Westfjords gave us, the students and last but not least, I thank my dearest *Roomie* for always being there to cover my back.

Completion of this thesis would not have been possible without the patience, encouragement, advice and support of my life's companion despite the majority of time we managed to spend in different countries. For this I also thank Internet the Almighty, as it has made nearly impossible things happen. I thank my matchless parents for the home and support they offer in every single thing we do and, of course, my sisters - for the moments of merely insane laughing and the inarticulate sounds of accordion, guitar, piano and drums. To be modest - these people deserve the utmost respect and eternal love from the humanity and, most of all - me.

1. Introduction

1.1. Introduction

Ports can be perceived in various ways, seeing their importance from different perspectives. The historic aspect of ports as strategically important military object in state of war, a „parking lot” for local fishing boats, an entrance point for foreign vessels that bring about new knowledge, culture and previously unseen products, nowadays is mostly perceived as a transport node (Hoyle, 1997-1998). Ports have the capacity to provide for movement of different goods, be it containerized freight, round timber, oils or chemicals. With globalization in maritime trade and transport integration reaching their peaks, integration of logistics makes another step forward, expanding the port concept even more, including concepts of distri-parks, logistic centre and free trade zones as crucial elements of global port (Lee et al., 2008). Regardless the reason, for a long time ports have attracted people through their dynamics, trade, range of available functions and, not of little importance, accumulation and notable turnover of financial values.

Norcliffe *et al.* (1996) identify three ways in which seaborne trade has promoted creation of urban settlements in sheltered harbours: 1) Directly trade-related jobs for physical handling of cargoes as well as indirectly trade-related jobs in financing, insuring, arranging passage etc. attracted people willing to take these jobs; 2) Trade partly supported concentration of customers and producers close to the port town; in the generally exporting ports their functions mostly included storage facilities and primary production of goods, while generally importing ports formed a closer port-city linkage through emergence of consumerism and import-processing businesses; 3) Ports with their convenient location are perfect for ship maintenance, repair and building facilities, creating new niches for workers, at the same time maintaining the trend for urban settlement growth.

The second half of the 20th century experienced a rapid boost in seaborne trade through decreased global freight shipping time, containerization and economies of scale. Increased freight volumes demanded more storage space; consequently, in order to increase the volume of the handled cargo, ports spread out, enlarging their territories (Wiegmans & Louw, 2011). Forced by global trade, ports had to develop so that ever so larger ships could be handled (Grossmann, 2008), thereby, if previously ports were the centre, dictating their own rules, now they have become an assistant commodity with never ending pressure to keep up with the pace of global trade.

In the maelstrom of global trade and ever insufficient port infrastructure capacity, the discussion on relationship between a port and its city has been mostly neglected. Although the question of what came first – a port or its town – is as rhetoric as the question of whether the chicken or the egg came first, a simple, yet at the same time precise way of describing the bond between these two in a post-World-War-II period was provided by Norcliffe *et al.* (1996, p. 124), stating that “[p]orts created cities and large ports created large cities”.

Since times when ports developed at the same pace with cities many things have changed and in most of cases the bond has become considerably weaker, witnessing a deterioration of the symbiosis between a port and its city. An explanation to this separation has been offered by Ducruet & Lee (2006) who identified the difference in factors that establish the rules for each of these – ports respond to technological advancements and international trade, while the urban environment is driven by changes in local conditions. With differing drivers of development, the impossibility for port and its city to grow in parallel seems rather obvious.

With growing ship sizes and volume of transportable cargo, river ports that were willing to keep in pace with the demand for global shipping, moved further downstream (Wiegmans & Louw, 2011), where deeper waters and new areas for port facilities were available. This is a trend of port out-migration that has been widely recognized among scholars (Daamen, 2007; Suykens, 1989; Wiegmans & Louw, 2010), port authorities and urban developers in port evolution. In 1971 it was described by Bird in the Anyport-model. This shift left large derelict port areas on the port-city interface, a zone that was uninhabited for long until the recent trend

toward waterfront revitalization. Vast amount of waterfront transformation research has been performed in the last 2 decades, focusing the attention of many researchers (see: Grossmann, 2008; Hoyle, 1997-1998; Sairinen & Kumpulainen, 2006).

Different models that describe and explain the evolution and consequent stages of port-city relationship have been developed. Most of them are applicable to ports that have the opportunity to expand their territory in a seaward direction – in these cases port structures outgrow their host cities (Daamen, 2007). Considerably less research has been done on cases where the initial space availability for port growth is restricted, emphasizing the importance of close coexistence between urban and port interface. When spatial limitations are apparent, a careful planning process must be applied that would provide balance regarding different development aspirations of port and urban development interests. Port-city evolution stands on three pillars – “the long term of cities, the short term of maritime networks and the middle term of ports” (Ducruet & Lee, 2006, p. 120) and the most successful is a medium state between three of these.

Wiegmans & Louw (2006) have stated that “...the era of unproblematic port expansion has ended”, thus in cases when port development is prescribed by space availability, port-city relationship can by no means be considered as losing their importance. The case of Salacgriva – a small port and a middle-sized town is the focus of this research. With the approximate number of inhabitants below 3500, this coastal centre of a 640 km² wide district with the total population of 9700 strives for a stable economy through sustainable development and a longstanding tradition for fishing, fish handling and port operation.

1.2. Problem statement

There is a permanent pressure on world's ports to increase their capacity. In most cases, capacity enhancements include introduction of more efficient and less labour-intensive equipment (Suykens, 1989; Baird, 1999), reducing the positive impact ports had on workforce concentration in earlier times. The rapid increase in ship sizes has put service efficiency and port accessibility as the most important factors in determining ports' competitiveness, while

diminishing the importance of local industries in ports (Grossmann, 2008). This is somewhat a worrying statement, particularly because local industries were the ones, providing for settlement concentration in port areas in the first place.

The recent trend toward decreased employment demand in ports, while port areas and infrastructure are further developed and expanded, creates a territorial conflict between a port area expansion and sprawl of urban areas due to the limited availability of space. Regarding medium sized and small ports, they are either still expanding their territories in order to raise their competitiveness or, as it can be seen in many cases with small ports, commercial activities are terminated, leaving former port areas for urban waterfront revitalization processes. The problem, looked upon in this study, deals with small port development in times when the global port trend is “going from various main ports by world region towards the development of a global ports’ network on old harbours”, announcing the system of a one-per-continent port (Bazan-Lopes, 2002, p.2).

1.3. Research objective

The main goal of the research presented in this thesis is to describe the changes that small port expansion introduces in port-town relationship in times when urbanization of port territories and waterfront is globally widespread. In this study the issues of global port development trends, port perception, sustainability, port expansion externalities and potential development scenarios for small ports are examined.

The focus of this research is on a case of Salacgriva, a town in Latvia, and its port. This research deals with literature analysis on port-related issues, identifies and describes the state of port-town relationship between Salacgriva town and its port, as well as considers the potential changes that may occur on the port-town interface when port expansion takes place. In this regard, opportunities to avoid serious conflicts between environmental, social and economic sectors are examined.

1.4. Research questions

The main research question for this study is the following: “What are the changes in port-town relationship that small port expansion introduces?”. In order to answer the main research question, several sub-questions have been identified: 1) what is the current trend for port development globally; 2) local environmental, social and economic side-effects of port expansion; 3) does port expansion coincide with sustainability principles; 4) what will be the benefits and drawbacks of port expansion in the case of Salacgriva?

1.5. Scope and limitations

As most of the world’s largest ports expand in order to keep up with the pace of global trade, small ports generally follow the trend toward decrease of commercial activities, giving green light to tourism and waterfront redevelopment projects. Although there is a sufficient amount of literature on patterns of large port expansion, incomparably fewer examples are available on small ports. Accordingly the main limitations of this research include the relative uniqueness of Salacgriva port development scenario, particularly because the overall global practice in small port development leads to port downsizing, prioritizing recreational use of former port areas. Salacgriva port is planning its expansion, although spatially it is strictly limited by adjacent urban areas.

1.6. Research methodology

This research interlinks academic knowledge, series of local level policy documents, with all above mentioned factors integrated in self-determination efforts of a small town. This study consists of three mutually linked components – literature review, qualitative interviews and GIS analysis. The issues of port-town relationship and their dynamics are revealed using the approach of a case study. The chosen site is Salacgriva - a medium sized town and a small port in Latvia. Literature studies are conducted in order to provide the necessary background for problem analysis.

The qualitative research method of semi-structured interviews was performed in order to clarify the standpoint of the decision-makers – Mr. Dagnis Straubergs - the mayor of Salacgriva district, Ivo Štenais - Salacgriva port manager and Jānis Megnis - the president of the Association of Small Ports of Latvia - regarding the role of Salacgriva port in local economy, society and politics. A component of this analytic part also sets the context for the case study, which is accomplished through analysis of local policy documents in combination with qualitative interviews.

As in port studies location and port connections play an important role, the application of geographic information systems (GIS) is crucial. Its aim in this research is to help visualize the connections that Salacgriva port has with other ports.

1.6.1 Interviews

As the decisions on port development are above all a result of a top-down decision-making, the interviewees selected are people that have some level of responsibility in the process. The qualitative research semi-structured interview approach was used to reveal their standpoint and their perception on Salacgriva port-related issues, resulting in a qualitative data set on the topic. The interviews were conducted in the beginning of December, year 2011. Two interviews were personal, while the third interview for the convenience of the interviewee was conducted via a video conference.

Semi-structured interviews “are generally organized around a set of predetermined open-ended questions, with other questions emerging from the dialogue between interviewer and interviewee[s]” (DiCicco-Bloom & Crabtree, 2006, p. 315). It has been selected as the most appropriate type of interviewing because all of the selected respondents have different connection to the issues of Salacgriva port and its development, thus individual modifications in interview questions are necessary. Two of the respondents are local-level decision-makers, while the third is selected to provide a broader scope on small port development in Latvia. The interviews were individual and an approximate set of questions that were used in interviews are summarized in Table 1.6.1-1. Not all respondents were asked the same set of questions, as their relation to Salacgriva port and its perception vary greatly.

Table 1.6.1-1 Set of interview questions

Question type	Topic	Respondents
Basic	The current position of Salacgriva port in relationship with Salacgriva town; in global and regional shipping; among other small ports of Latvia?	All
Basic	Do locals perceive the port symbolically?	All
Basic	What are the most fundamental limitations for Salacgriva port development?	All
Basic	Is hinterland expansion an option for Salacgriva port (new destinations, new types of cargo)?	All
Basic	Does Salacgriva port development in a more industrial direction contradict the sustainability and nature protection aspirations of the town?	All
Basic	What is your opinion on the most appropriate uses of derelict port areas?	All
Additional topic	Local policy sustainability goals and port expansion.	Mayor of Salacgriva
Additional topic	Port expansion capacity.	Salacgriva port director
Additional topic	Trends in small port development in Latvia.	The director of the Association of Latvia's small ports

1.6.2 Geographic Information Systems

“GIS is a powerful set of tools for storing and retrieving at will, transforming and displaying spatial data from the real world for a particular set of purposes” (Burrough & McDonnell, as cited in Wright & Yoon, 2007, p.3). In this study GIS was employed as a mapping tool on Salacgriva port geographic setting and turnover capacity showings that assist the part of the research that sets the context for Salacgriva port. It was also used in analysis on the role of Salacgriva port in global and local shipping, and employed as a tool to describe and identify its hinterland.

The data for spatial analysis of Salacgriva port operation activities was provided by Salacgriva port authority from their annual ship registration database. Data was modified for it to match the demands of the mapping program. Not all entries were transformed into route connections, as only repetitive cargos and destinations were kept in the data file.

1.6.3 Literature review

The literature review was performed in order to critically assess the port-related issues and evaluate the appropriateness of global knowledge application to small port development in a specific case of Salacgriva port. Scientific journals, article reference lists, book sections and reviews along with author manuscripts were reviewed, focusing on topics of port governance and finance, port-city relationship case studies and general models, port perception, sustainability goals in port development, negative externalities from port expansion and hinterland studies. After the general topic was revealed, local policy documents, such as port development strategy, town and county development strategies and tourism strategies were analyzed. These documents serve the aim of describing local port-related development aspirations.

Conclusions are drawn, applying the analysis that was performed on the literature review part to the local situation that was revealed by the local policy document analysis, geographic information system application and interviews.

2. Literature review

2.1. Development scenarios for small ports in the 21st century

It is difficult to name identical ports. It is also extremely hard to distinguish among and compare ports according to their size, mostly because the ultimate size of a port does not directly indicate to the port performance or its role in local, regional or global economy. Aforementioned factors are important to bear in mind when port development plans and strategies are elaborated. This section is dedicated to common port development trend identification and small port development issues. A description of the advantages that small ports hold is introduced revealing the recommendable directions for small port planning.

2.1.1 General trends in port development

On one hand ports have nowadays become a logistics platform, linking production centres with consumption epicentres. On the other hand, the local continuum of ports is becoming more and more important through comprehensive strategic plans that are concerned with network creation for port authorities and terminal operators for them to improve their performance (Moglia & Sanguineri, 2003). Regardless the port size, in cases when port infrastructure expansion is selected as an important step in port development, there are three main aspects to focus on: timing, relief interval and dimensions for the expansion. Most frequently two of the latter aspects are considered in expansion planning; however, to make sure that that expansion is economically efficient, it is crucial to see all three of them in a joint approach (Dekker & Verhaeghe, 2008). Port modernization process in port-cities has to consider the present natural and ecological systems, elaborating sustainable port development policies (Bazan – Lopes, 2002). Interaction of these elements in recent years has promoted

emergence of series of new, in seaport development previously unseen trends on the global maritime transport planning stage, dictating new rules and setting new agendas for port development.

Levels of investment in port facilities have increased due to the pressure of global maritime trade on ports to increase their capacity. At the same time the widely recognized trend of new port infrastructures being less labour-intensive imposes negative socio-economic consequences in port-city relationship, diminishing the attraction of port modernization (Bazan – Lopes, 2002) and skewing the image of port industry as a source of wide social guarantees and wealth (Palmer, 1999).

The recent emergence of regional port hierarchy, particularly pronounced through port specialization in hub and feeder ports, has been described by Ducruet *et al.* (2010), who identified structural evolution in the Atlantic liner service network. They identify few well-connected ports, while the rest (and the greatest part) of ports have low levels of connectivity in the network. The term of “small worlds” is accordingly introduced, defining it “as regional or specialized groups that we can define as specific clusters where ports observe a high dependency to one or to a group of other ports” (Ducruet *et al.*, 2010, p. 509). This claim fits the idea, brought forward by Bazan-Lopes (2002) who speaks of a one-per-continent port system. Globally the inter-port competition has markedly grown, popularization of inland port terminals has provided for transport chain diversification at the same time when the overall political support to water-based cargo transport has become omnipresent (Palmer, 1999). In today’s maritime network “regional and historical proximities confront the trend of contemporary ubiquity facilitated by technological improvements and the search for optimal economic efficiency” (Ducruet *et al.*, 2010, p. 517).

The modern port development has created remarkable change in traditional port and port community dynamics. From a body, solely occupied with local level port administration, nowadays port authority is expected to link the market needs with the needs of global operators. Interdisciplinary approach to port strategy planning is crucial and in addition to the traditional involvement of infrastructure specialists, economists and lawyers, today’s port

strategies demand the knowledge from disciplines like environmental science, urban planning, financing, communication, logistics and marketing (Moglia & Sanguineri, 2003).

2.1.2 Variety of ports

Series of criteria *set the table* for port operation – governance, financing model, technical capacity, geographic location, proximity to major shipping routes, existing road and rail infrastructure and many others, creating prerequisites for the work that will be performed by a specific port. Much academic work has been done on global ports, major maritime trade shipping routes and the growing demand for hub-ports to increase their capacity due to technological improvements in container shipping, while drawing less attention to smaller regional ports. The latter, however, is the object of this research; therefore the state of affairs in regional ports is described through comparison to global large-scale trends.

Containerization in the latter decades has favoured creation of hub-ports through increased shipping productivity and container network expansion (Fremont, 2007). Hub-ports must maintain high technical standards to provide services for large vessels (Coulter, 2002) - in these ports substantial investment is needed to maintain and constantly enhance the ports capacity. Undeniably, these ports generate great financial benefits to most of the parties involved, repeatedly proving it viable for new investment. With this kind of dynamic present in the freight “hot spots” of the world, a different situation prevails in smaller peripheral ports. Ports on the periphery can be described “... first, by a limited domestic market and, second, by a more remote potential hinterland for which they have to compete with one or more other ports” (Brooks *et al.*, 2010, p.1). Less competitive characteristics in terms of port depth, size of the captive hinterland, berth quantity and equipment often regulate the pace for these ports to be slower and their turnover rates lower. Although these ports are important players in local and regional economies as well as freight distribution, the generated income is substantially lower.

As ports operate, linking foreland (sea side) and hinterland, their location is of great importance. There are more than 200 ports in the Baltic Sea, creation and existence of which

has been mostly based on historic considerations, generally the Hanseatic League, which has historically promoted trade among Northern European ports. As the trade in the Baltic Sea to some extent can be perceived as a separate trade system, it seems appropriate to divide between large and small ports of this region. Around 11% from all the Baltic Sea Region ports handle more than 10 million tons annually. The number of small ports in this region is significant - 66% of the Baltic Sea ports - and they handle less than 2 million tons of cargo annually (Baltic Ports Organization Secretariat, n.d.). Although on a global scale, most of the Baltic Sea ports would not be perceived as important players, on a regional scale, these ports are of great importance, providing for freight movement among the cities and towns of the Baltic Sea region. Salacgriva port, which is the case study of this research, fits in the category of small ports.

Intermediacy and centrality are spatial qualities that indicate sites whose location in a transportation system is strategically significant. Intermediacy relates to locations between important origins and destinations, while centrality is related to traffic-generating powers of a particular port. Three combinations of shipping line proximity and hinterland centrality exist. In cases when intermediacy and centrality are well met, with an appropriate management, a port has great preconditions to becoming a hub port. In situations when one of the factors is well met and the other is not, a beneficial status for the port can still be provided by emphasizing the favourable factor. There are also situations when neither intermediacy nor centrality is well pronounced. In these cases ports are peripheral according to both location measures and they are expected to encounter great difficulties in meeting shipper's needs (Brooks *et al.*, 2010).

There are, however, also some advantages that peripheral ports, in comparison to centrally located and more busy ports, possess, such as better performing inland transport networks, more individual approach to clients, greater flexibility and access to the business environment and assets (Brooks *et al.*, 2010). The strengths and opportunities for small peripheral ports are discussed in more detail in the next section.

2.1.3 Opportunities for small port development

In the dynamic position that ports are, strategy for port development must be drafted bearing in mind general market development trends and each port's characteristics (De Langen, 1998). As ports are not only a crucial connector in intermodal freight transport system, but also a source of income and regional economic growth, there are series of factors that determine the extent and orientation of operation of a particular port: port size, hinterland accessibility, infrastructure, superstructure, extent of service concentration, technical characteristics, governance model and others. Therefore, the development potentials of large and small, central and peripheral, deep-water and shallower water ports are expected to have fundamental differences.

In cases when substantial investment is accessible, it is not always the case that ports should work toward a hub-port status. De Langen (1998), for instance, opposes the idea of medium sized ports growing in this direction in the break-bulk market. He reposes his idea on the promising future that medium sized ports hold, while the hub-port concept is bound to losing its "incontestable status" (De Langen, 1998, p. 263) due to density, land constraints and traffic congestions (Hesse & Rodrigue, 2004). De Langen (1998) emphasizes the prospect for increase in containerized freight movement to peripheral small ports, and anticipates that, although the containerization of inter-continental cargo flows has already reached a high level of development, intra-continental cargo flows have not and are a viable opportunity for the times to come. However, differences in regional markets should be considered when choosing a specification of a port toward increased container handling capacity and, although diversity in cargo handling opportunities (containers, dry bulk and general cargo) is of great importance in small ports, a great emphasis on a prospective increase in container handling should be based on the market demand. According to Baltic Ports Organization Secretariat (n.d.), majority of small Baltic Sea ports handle dry bulk, thus investment in container handling capacity increase might not bring the anticipated results.

Long distance inter continental shipping with large hub-ports involved is an important component of global trade. Major gateways (ports and airports) attract large-scale cargo flows

and, once the cargo is in the hub port of the proper continent, the level of intermodality of a port comes into play (Hesse & Rodrigue, 2004). Ports interlink maritime, rail and road transport in a combination and to an extent which best serves its hinterland. It has been calculated that additional 1.000 km to freight shipping distance increase shipping costs by \$190 while the same increase in distance by land raises the cost by \$1.380 (Clark *et al.*, 2001). The scarcity of fossil fuels adds to financial considerations - as fossil fuels become more expensive, the demand for water transport is expected to grow. Short sea shipping in particular has the future potential to increase its turnover rates (Morris & Gibson, 2007) due to its capacity to shorten the distances in comparison to road traffic and use less fuel, simultaneously reducing CO₂ emissions (Goulielmos, 2000). Scholars and policy makers for over 30 years have been struggling to define Short Sea Shipping (SSS), but, as Douet & Cappuccilli (2011) state, they have not succeeded. Nevertheless, with detailed definition still to come, the idea of SSS is for it to be “an alternative form of commercial transportation that utilizes inland and coastal waterways to move commercial freight from major domestic ports to its destination” (Douet & Cappuccilli, 2011, p. 969).

Small and medium sized ports can possess important advantages through specialized activities, attracting operations that require flexibility and are difficult to standardize. Specialized activities that deal with the handling of extremely large, heavy or irregular equipment and construction components are another opportunity. Brunsbüttel, Büsum, Dagebüll, Helgoland and other ports on the German North Sea coast are an example of how small ports merge in logistics chains that help provide service to offshore wind farms (Baltic Ports Organization Secretariat, n.d.). With increased demand for alternative sources of energy, such as wind power, small ports can adapt to handling this type of cargos and attract its import potential.

Advantageous transit time can be provided by offering direct links to these small specialized ports, when a port is not directly called by other services. The prospect to increase passenger traffic is another opportunity for small and medium sized ports due to their flexibility and comparative attractiveness to tourists. Industries that have considerable seasonal fluctuations (like food processing, cacao and flour industry) are also a good

opportunity for small and medium sized ports in maritime traffic due to their flexibility (De Langen, 1998). Handling of cargo, such as wood, paper and pulp is also more suited to small and medium sized ports because they can fulfil the need for dedicated storage areas and terminals more easily. The use of unutilized port area can be dedicated for non-port-related activities, such as installation of wind turbines, as it can be seen in examples from port Corpus Christi in U.S. (The Port of Corpus Christi, 2009) and it has been planned in various other ports in the U.K. and Canada (Johnston Publishing, 2011; Boutilier, 2011).

2.2. Prospective local implications when port expansion takes place

Port infrastructure improvements clear the way for new port functions. Technology development, in its turn, sets the standards for technological solutions in port expansion. Port development sometimes involves port function relocation away from the city centre, giving space for urban development in the derelict port territory. All the above mentioned factors mark changes in port development trends and port – city relationship that are additionally influenced by “the limited employment multipliers created by contemporary port and transport technologies” from a socio-economic standpoint (Bazan – Lopes, 2002).

Scholars argue, whether hub-port status and continuous increase of vessel carrying capacity or service frequency, speed and reliability improvements (Goulielmos, 2000) are the most important factors to keep in mind when planning port expansion. Although the issue is undeniably of great importance, a “side-effect” in both cases is the question of whether port expansion is justifiable from a local perspective. Unlike the first dispute, the latter can, in fact, be solved through a thorough analysis on ports positive and negative impacts, drawing adequate attention to the implicit risks that result from spatially aggregated costs and the benefits that are often distributed over a wide area. The issue is addressed in the next sections, disclosing the relevance of sustainability in port operation as well as the local implications in environmental and socio-economic sectors.

2.2.1 Sustainability and ports

Efficient economic performance, ecological sustainability and social equity have been entitled the major objectives for a port manager (Goulielmos, 2000). Sustainable growth is the strategic ambition of any port (Subhan & Ghani, 2008). It should be noted that sustainability and sustainable development are terms that can not be perceived as synonyms in the author's point of view, due to the need for a broader discussion of whether at all or to what extent development can truly be sustainable. Regardless the more specific debate, defining sustainability has been a struggle for scholars since the first appearance of this term in the second half of the 1980's. The broad concept of sustainability involves responsible use of resources so that future generations would have an adequate amount of resources to satisfy their needs. Its main concern lies in ensuring that "while economic and social development continues, the natural and human environment is preserved, and the impacts of development and environmental management are equitably distributed" (Amekudzi *et al.*, 2009, p. 340). In port research, Goulielmos (2000) defined port sustainable development as "the situation in which the port is able to meet its own needs without endangering its own future" (Goulielmos, 2000, p. 193) with the latter related to economic, technical, infrastructure and superstructure, staff, know-how and other values.

Sustainability addresses environmental, community and financial impact issues holistically and, if applied with best intentions, can create new opportunities for improved reliability, efficiency and cost savings. In order to reach proper sustainability in ports, port infrastructure, next to port buildings and operation, must be transparent and performed while keeping in mind resource conservation issues (Koshuta, 2011). "...[A] sustainable transportation system must be safe, efficient in providing accessibility and mobility, and in enhancing economic productivity, without impacting the natural environment negatively – all in a manner that is equitable to those who use and are affected (either directly or indirectly) by the system" (Amekudzi *et al.*, 2009, p. 340). Several approaches and conceptual models are used to implement sustainability goals in sectors that are similar to port operation.

Sustainability is a wide topic that is broadly used in various policy planning levels and documents, frequently without delving into much detail on specific sustainability indices

which can differ from case to case. Two essential aspects of port sustainability – environment and socio-economic consequences of port expansion - are further analyzed in more detail.

2.2.2 Environmental implications of port expansion

Environmentalism and focus on nature protection has become a universal lens through which, particularly in Europe, most decisions in policy planning are made. It is a top-down approach through law enforcement that environmental issues must be considered in project planning and policy-making process. Although strictly regulated, environmental law implementation often fails and decisions in favour of economic, instead of environmental, benefits are taken.

A rather peculiar capital comparison has been done by Goulielmos (2000), who defined environment as a renewable or quasi renewable natural capital that provides ecological services. He also identified port buildings, quay walls, equipment, superstructure and infrastructure as the traditional concept for port capital. This is a very obvious setting that shows the difference in diametrically opposed values that are integrated in ports. Any port expansion, in fact, raises the question of priorities whether on the side of environmental or socio-economic issues (Goulielmos, 2000). For a successful balance between nature and socio-economic benefits, local awareness and bottom-up approach in decision-making is crucial. For this reason regional, international and global scale projects should be elaborated in a manner for them to not only cohere with the binding legal regulations, but these documents should present the point of view of local inhabitants to ensure that all interests are represented and in the end the best-possible scenario is selected (Morris & Gibson, 2007). With above mentioned in mind, port expansion projects are further discussed from a local point of view, identifying the most important environmental effects they have the potential of creating.

The generally accepted practice in cases when port development in particularly protected areas is discussed determines that nature conservation issues must be properly evaluated along with socio-economic drivers. Plausible impacts must be evaluated in this regard in an early stage of project development, weighing the applicable modifications in project design and, in

cases when environmental consequences can not be avoided, full offset measures must be implemented (Morris & Gibson, 2007).

Although ports often serve large regional and international markets, the induced negative environmental consequences are mostly local. Ports are not only nodes, connecting various modes of transport – they also are the pollution “nodes” that witness the impact coming from land, ships and ports (Goulielmos, 2000). Environmental focus in port development requires additional attention. With increased port capacity, traffic intensification takes place. Local communities are adversely affected through increased noise levels, light pollution, visual impact and disturbance in traffic movement. Negative environmental impacts, such as garbage, sewage, dust, dredging side-effects, air pollution from ships and traffic congestions - accompany most of primary port activities (Figure 2.2.2-1) without mentioning the potential damage that results from ship accidents (Commonwealth of Australia, 2000; Goulielmos, 2000; Morris & Gibson, 2007). Air pollution impacts in ports are particularly important due to the large emissions of diesel exhaust, particulate matter, and nitrogen oxides that can induce significant health risks, such as asthma, respiratory and cardiovascular diseases and premature mortality to local residents (Bailey & Solomon, 2004).

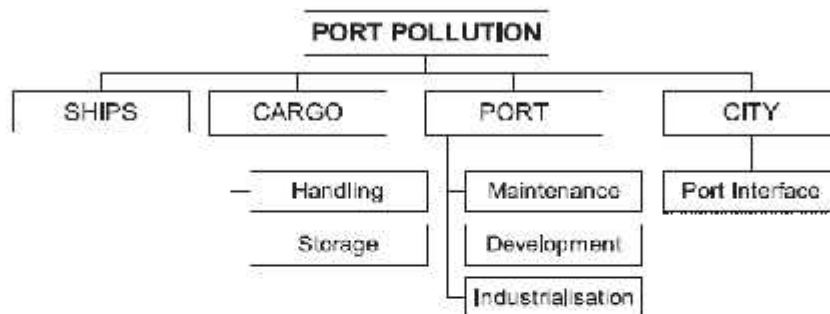


Figure 2.2.2-1 Sources of port pollution (Goulielmos, 2000, p.191)

Although maritime traffic integration is often mentioned as a key to a more environmentally friendly transport system, port activities create extensive negative externalities, raising an important question among local decision-makers of whether the benefits from port activity really outweigh the negative environmental impacts it creates.

2.2.3 Socio-economic implications of port expansion

Maintenance and advancement of ports requires considerable investment, be it public or private, and port functioning returns direct and indirect economic and social benefits (Dekker *et al.*, 2003). While port expansion has traditionally been perceived as having a great potential to improve local socio-economic conditions through additional employment and income, recent decades have witnessed considerable decrease of the positive impacts from port operation. It has been recognized accordingly that the role of ports in the interest of its adjacent areas is nowadays exaggerated. In fact, port's capacity to generate negative environmental and quality of life effects has increased, raising local awareness of social and environmental costs that accompany the economic benefits that port brings. This is a trade-off that has become particularly significant due to innovative technologies in port infrastructure, providing labour efficient, capital intensive and land-intensive port operation (Benacchio *et al.*, 2000; Dekker *et al.*, 2003; Musso *et al.*, 2006).

Port expansion should not be based solely on consideration that it will have beneficial impact on the economic development of an area. Although generally the gains from port activities are increasing, their positive economic impacts are shifting away from local, port-adjacent areas to wider spaces, be it regional or international. Because of globalization in maritime transport, investment, also of public money, in port development improves conditions, in which large foreign enterprises function alongside local. In some cases this investment unintentionally maintains the interests of large enterprises, enhancing their ability to outmatch local market players. Increased investment in port facilities enlarges the space between local and regional input to port existence, such as territory, natural potential and public money investment, and the outcome on employment and other economic gains.

Competition between neighbouring ports occurs, dividing a comparatively fixed business among them. In this case, expansion of one port has negative effects on the turnover of the other closest port, decreasing its economic rent by the amount of the newly developed ports revenue (Benacchio *et al.*, 2000). This is often a conflict between the ports of the same nation, not an international clash.

The interaction between ports and economies in which they function is progressively weakening. Rise in port throughput does not mark a subsequent positive change in employment and local income. Increased traffic flow witnesses decreased amount of port operations and lesser employment demands due to improvements in technology, compared to earlier times. In this regard, the connection between port benefits and costs is not the only aspect to be re-evaluated. The local community faces a constant increase in negative aspects in port development in terms of pollution and congestion intensification as well as the loss of coastal space to industrial development (Benacchio *et al.*, 2000). Vigarie' identified the magnitude of risk of ports becoming solely a freight transit point, without the positive impact it has traditionally had on added value creation and employment (Vigarie', from Benacchio *et al.*, 2000). To sum up, it can be stated that, although port development undeniably brings economic interests, it should be clearly identified of where and to what extent the benefits will go. The negative consequences in natural, environmental and quality of life values will accumulate in the local environment, while more and more frequently the economic benefits leave the local market, favouring regional or, as it often happens, international players.

2.3. Port governance and financing

As a fundamental part of most of logistics networks, having a say in many different sectors, ports sustain their role in an unenviable environment of continuous changes. In these conditions the ability to adjust to changing situation becomes crucial, dictating the pace for port activities and their management.

Last three decades have seen a global shift in port ownership trends. Approximately until 1980's private investment in port sector was an alien phenomenon. Port activities were centrally managed and financed. Omnipresent central government control, which predominated most of the world's economies from 1960's to 1980's, among others, provided for port service quality, causing port service deterioration in the long run through inflexible, inefficient and slow planning. With restrictive labour practices and lack of investment in port infrastructure contributing to the already insufficient port performance, the importance of co-ordination and consultation started to occur to policy makers (World Bank, n.d.). Although the

decentralization of port authority functions can be seen as an opportunity to decrease the central approach to port governance by shifting the authority function among different levels of government, the general trend in many countries follows the track leading away from models of public governance (Brooks & Cullinane, 2007).

This setting has provided that in the last decades port authorities, a body “with statutory responsibilities that manages a port’s water and land-side domain” (Verhoeven, 2009, p. 6), have become commercial entities that centre their resources on successful management and coordination (Van der Lugt & De Langen, n.d.). Most of today’s world’s ports function as business enterprises. According to Port Nelson (2010), “(t)he behaviour and performance of a business is greatly influenced by the composition of its ownership”. Accordingly, performance of a port depends on its ownership and governance (Brooks & Pallis, 2007). This is when power devolution programs became an important issue in port sector. Devolution has been defined as “the transfer of functions or responsibility for the delivery of programs and services from the federal government to another entity. The other entity may be another order of government or a non-governmental organization (NGO), community group, client association, business or industry.” (Rodal & Mulder, 1993, p. 28). Some of the possible reasons for devolution have been identified by Baltazar & Brooks (n.d.):

- 1) Business-like thinking might increase the income from organizations that have previously been centrally governed;
- 2) Increased financial returns from previous investment in port infrastructure through taxes, paid by the new port administration might occur;
- 3) Overall aspiration to detach regulating duties from the operational side of port functions.

In one of her earlier works, Brooks (2004) mentions power devolution as part of a “recent trend toward alternative service delivery (ASD)” (Brooks, 2004, p. 168), pointing out two main drivers for its emergence. She identifies information technology development as a factor, supporting the increase of public participation, and points out the need for a more

effective resource distribution, especially as far as financial assets are concerned. Alternative service delivery spread contributes to power devolution practice, thus reasons for ASD imply that devolution process is taking place or might be initiated any time soon.

As a tool for dealing with the foreseeable uncertainties regarding the selection of devolution model, The Matching Framework (MF) has been introduced. It “views organization performance as a function of the match among the characteristics of the organization’s environment, strategies, and structures” (Baltazar & Brooks, n.d., p. 3). The environment sector in this framework incorporates remote, industry and operating environments where the first are concerned with external factors having an impact on industries, the second dealing with factors affecting industry’s participants and the latter composed of factors that are encountered on a regular basis. Strategies sector incorporates product and market scope next to a competitiveness approach. On one hand, the greatest focus of the structural part in The Matching Framework is put on the extent of behavioural rules, norms and procedures, with the extent of decisions, taken at higher levels of organizational hierarchy in port, on the other. In this framework the level of port performance depends on the fit among these three sectors (Figure 2.3-1).

As for the EU, the present-day port management systems have been greatly affected by cultural, social and economic developments. Countries that have recently regained their sovereignty have a very recent history of port regulations, thus their central port management systems include some self-governing elements, but these systems are different from the most widespread port management models - Hanseatic, Latin and Anglo-Saxon (Baltic Ports Organization Secretariat, n.d.).

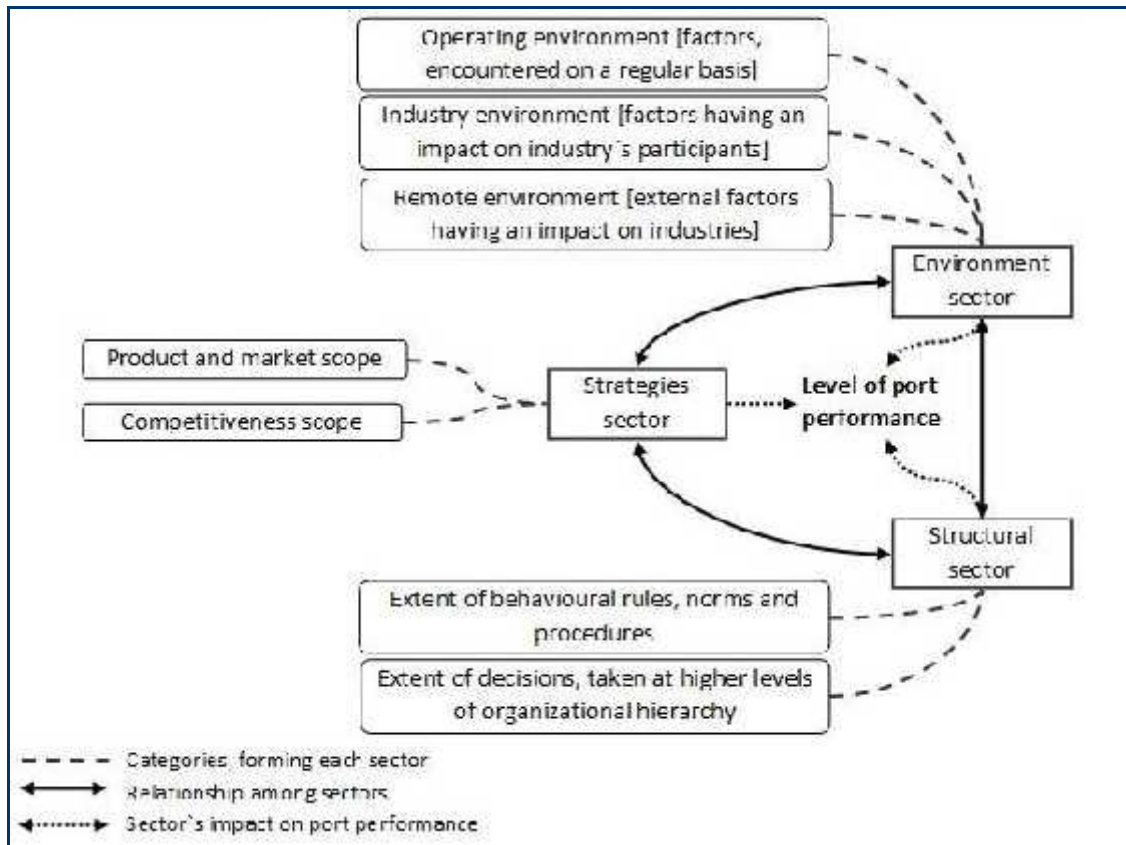


Figure 2.3-1 The Matching Framework in Organization performance (modified from Baltazar & Brooks, n.d.)

There has been an extensive discussion among port governance scholars regarding the most convenient, profitable and transparent combination of port governance, ownership and management. World Bank (n.d.) divided three basic port financing models: 1) Ports that function as an entirely public entity and are funded by the national government; the central government supports port development due to the common belief that “investments in port assets have strong direct and indirect multiplier effects on the entire national economy and, further, that the commitment of public resources is necessary to encourage co-investment by the commercial and industrial sectors” (World Bank, n.d., p.7); 2) Entirely private ports, particularly in the United Kingdom, that function as enterprises and use their revenue to provide for port operation (World Bank, n.d.; Brooks & Cullinane, 2007); 3) A mixed port financing model – the so-called public-private partnership (PPP).

Brooks & Cullinane (2007), in their turn, criticized the World Bank division as including too little specification and published their approach to the most popular *combination sets*: 1) Central government owned with central government management and control; 2) Government owned but management and control are decentralized to a local government body; 3) Government owned (federal, regional or municipal) but managed and controlled by a corporatized entity; 4) Government owned but managed by a private sector entity via a concession or lease arrangement, or owned and managed via a public-private partnership agreement; 5) Fully privately owned, managed and controlled.

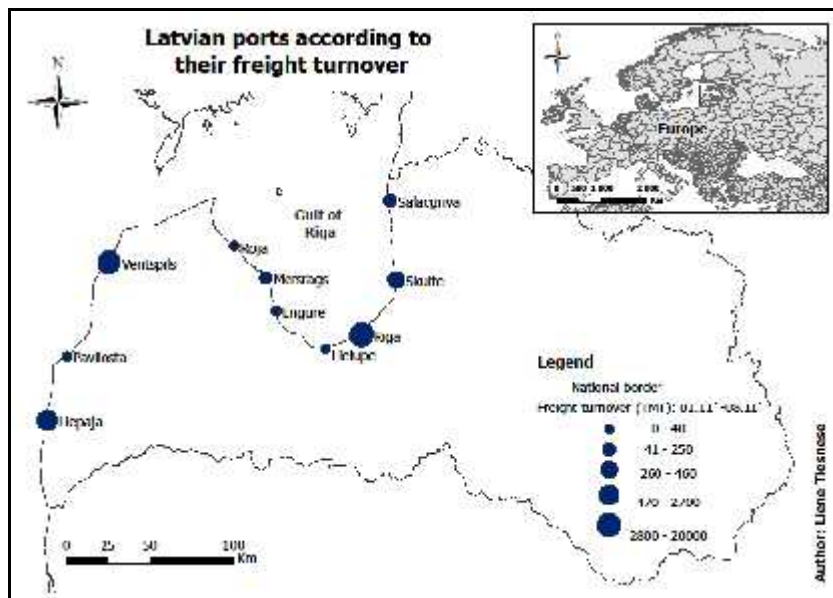
The relative performance of an enterprise, *int. al.* a port, has not been proven to have a direct relation to the type of ownership, be it public or private, and, according to Liu (1995) there is no objective reason to award the superiority of private ownership model over the public. Nevertheless, the mixed port financing model is becoming more and more widespread, as the governmental resources are getting more and more limited, private investment can: 1) increase the revenues from port operations; 2) expedite project implementation; 3) increase accountability (Asian Development Bank, 2006). The recently increased interest of private sector in port industry has emphasized the importance of port investment recovery, which can be done through cost-based pricing. In regard to port financing and pricing practices, a substantial diversity among EU ports prevails, emerging from diverse judicial and cultural traditions, port management systems, jurisdiction and the autonomy granted (Haralambides *et al.*, 2001).

3. Salacgriva port

3.1. Physiogeographic description of Salacgriva port

With 10 ports nation-wide, Salacgriva is one of 7 small ports of Latvia (Figure 3.1-1). Geographic location of Salacgriva port underpins its existence, while climatic conditions, particularly in winter, are a limiting factor for its operation.

Salacgriva is the northernmost port of Latvia, located on the eastern coast of Gulf of Riga, approximately 100 km north from the capital. It has been constructed on Salaca River. The river, housing Salacgriva port in its estuary, is vital for its biological diversity and little-affected ecosystem on a national scale. It is a 95 km long and for a long time it has been an important site for spawning of salmon (Gr nberga & Spri e, 2008) and lamprey.



*Figure 3.1-1 Latvian ports according to their freight turnover in January-August, 2011
(created by the author, base map - EuroGeographics, statistics - Ministry of Transport)*

The area, managed by Salacgriva port authority is 74 ha, located in two nearby ports – the territory in Salacgriva town occupies 14 ha with its water area reaching 29 ha, and the territory in Kuiviži port (4 km outside the town of Salacgriva), which occupies 25 ha of terrestrial and 6 ha of water area. Kuiviži port has a similar history as Salacgriva port – both of them started off as small fishing harbours. The emphasis on their future developments, however, is essentially different – while in the heart of Salacgriva a commercial port promotion is underway, in the more remote port of Kuiviži, the necessary infrastructure for yacht tourism and recreation is developed. The rationale behind these decisions will be revealed through interviews with local decision-makers later in this research. As the main focus of this research is Salacgriva port and its relation to town, the situation in Kuiviži port will not be further analyzed. Technical specification of Salacgriva port is the following: it has 6 berths with the maximal allowable draft of 5.7 m for two of these (Figure 3.1-2).

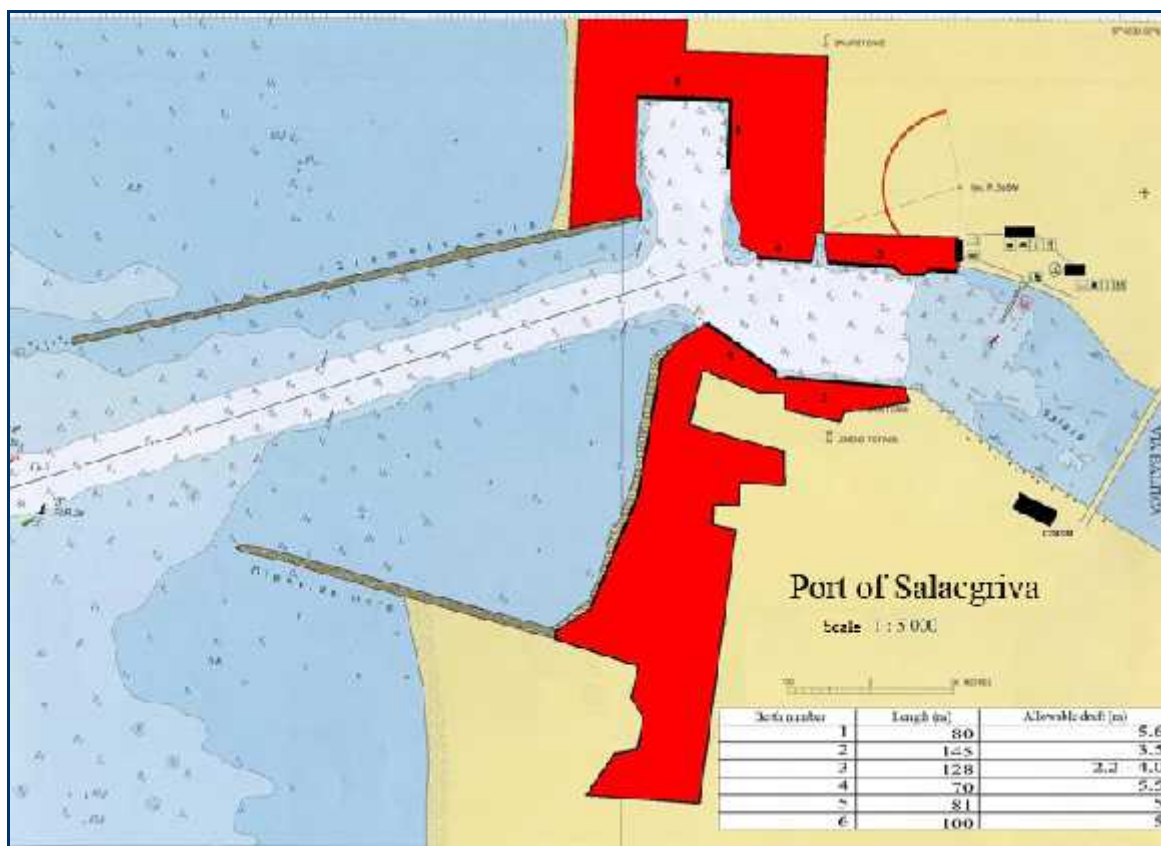


Figure 3.1-2 Salacgriva port (Salacgriva port Authority, n.d.)

Port is employed mostly for log export and loose cargo operations, such as peat and woodchip. Port operation in more detail is discussed in chapter 3.7. Storage spaces occupy 6 ha of Salacgriva port territory while there are several storage sites that are located outside its territory with the maximum distance of 6 km (Konsorts, 2008; Salacgriva port authority, n.d.). Salacgriva town surrounds its port in a very close proximity, thus even the distance of 500 meters from the port to the main road which cuts through the town in its very centre, creates substantial disturbances to its environment.

3.2. The history of port and the town of Salacgriva

Initially Salacgriva was a castle of archbishop of Riga, built in year 1226 in order to protect his only port in Salaca estuary and govern the access to its basin, the so-called *Gate of Salaca*, from the sea side. First documental evidence of Salacgriva port is dated by year 1392 (Caune & Ose, 2004).

Development of Salacgriva village in its present location was commenced in year 1870 when coastal trade began to prosper in the Baltic Sea. The fortunate location of Salacgriva port as the only natural port for the Salaca basin allowed it to become an important node for trade in North-Vidzeme, exporting round timber and grain to the capital Riga and abroad. In 20 years time - from 1897 to 1907 - the village grew and new living houses and warehouses were built. In this period the port imported mostly salt, coal and metal (Konvers cijas v rdn ca, 1939).

By the end of the 19th century, when the government of Russia was about to begin construction of port moles and deepening of Salacgriva port to allow larger ships to enter, the rapid growth of nearby Ainaži port, in a distance of only 15 km, interrupted these plans. Ainaži port was built in 1903, simultaneously with a new rail-road system that connected Ainaži to the largest cities, e.g. Valmiera, inland and, further overland, with Riga (Figure 3.2-1). At this time Salacgriva port had no good terrestrial connections to largest cities, which is why Ainaži port experienced a more rapid growth.



Figure 3.2-1 The rail road system in Latvia in 1903 (Altbergs *et al.*, 2009; modified by author)

Rail-road as a convenient way for transporting cargo further inland, to a great extent, took off the task from coastal harbours like Salacgrīva to supply the capital with goods that were produced in the periphery (Salnais *et al.*, 1936). With the new conditions in place, plans for Salacgrīva port expansion were withdrawn, leaving it in its natural state with the river at its mouth being 3-4 meters deep and approximately 200 m wide. Nevertheless, it was still accessible for small coastal boats, thus coastal trade could last.

Salacgrīva port in its present-day location was built in 1959, 10 years after a fishermen co-operation was established in Salacgrīva. With 2 large fish processing factories on each side of the river, Salacgrīva port was designed to attend to fishing ships. First 30 - 40 years, until the 1990's, turned out to be prosperous for Salacgrīva port when it experienced rapid development as a fishing harbour. After the collapse of local fishing industry in mid 1990s, port authority took the decision to restructure main port activities in a way that cargo shipping could be launched. Now, 15 years later, port expansion plans that include breakwater reconstruction and construction of a new terminal are developed. Salacgrīva port authority embraces the concept of it becoming an even busier commercial port.

3.3. Power distribution in Salacgriva port

Sea port management in Latvia is performed on two levels - national and municipal, with the port being an entirely public entity. Port act of 1994 (Law on Ports 1994) regulates the operation of Latvian ports, declaring port authorities as non-profit institutions with a landlord status. Port authorities manage ship channel maintenance and take decisions regarding infrastructural investment while operation in ports is assigned to private companies (Baltic Ports Organization Secretariat, n.d.). It is also the competence of port authorities to coordinate private investment with port operators at a local level on the basis of land lease agreements (Maudrich, 2000). In accordance with the above mentioned, Salacgriva port can be called a landlord port.

There is an expressed hierarchy in governing institutions of Salacgriva port (Fig. 3.3-1). The national parliament is responsible for legal regulations of Latvian port operation. The Regulations of the Cabinet of Ministers set up the working environment and regulate the Salacgriva District Municipality, which, in its turn, appoints head officers and, consequently, regulates the whole decision-making process of Salacgriva port Authority.

Every port of Latvia has a board, which is responsible to the municipality (Maudrich, 2000). As the national Cabinet of Ministers and Ministry of Transport also take part in the Board of Salacgriva port authority, which, in its turn, is the decision-making body for Salacgriva port, the influence of central government on Salacgriva port authority is very evident. The Board of Salacgriva port authority is formed by equal number of central government and district municipality representatives. Overall, there are 10 board members. The interests of stevedores in the Board of Salacgriva port authority are represented by their assignees. Salacgriva port Authority is officially bound to implementing municipality functions (Salacgriva district municipality, 2007).

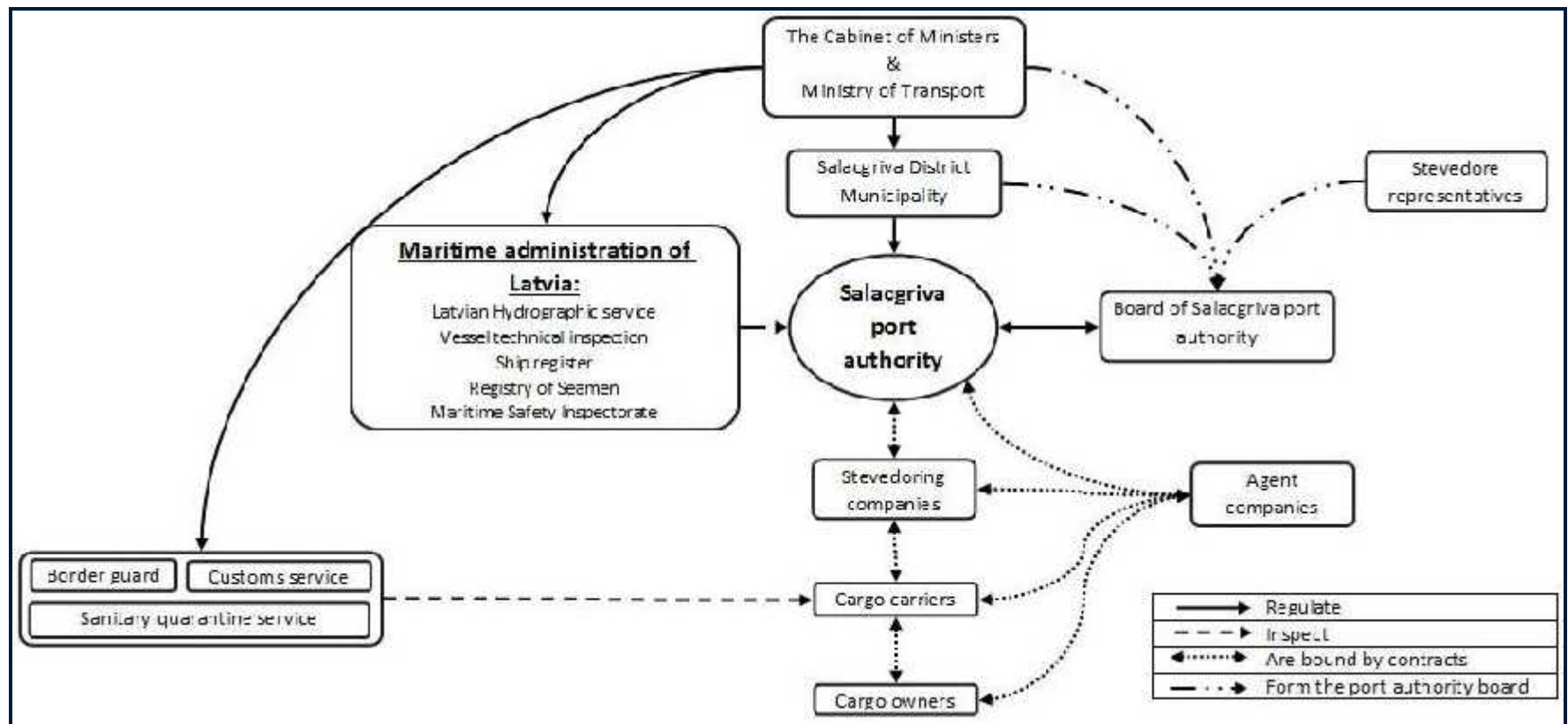


Figure 3.3-1 Salacgriva port management scheme (modified from Salacgriva port authority, n.d.)

Through law and regulations, the Cabinet of Ministers along with the Ministry of Transport set the operation of the Maritime administration of Latvia and maritime cargo inspection bodies, such as the border guard, customs service and sanitary quarantine service (see Fig. 3.3-1). The Maritime administration of Latvia, in its turn, inspects and regulates the performance of Salacgriva port authority. Once again, the obvious dominance in this type of governance model is represented by central regulatory bodies, where one ministry-subordinate institution inspects another ministry-subordinate agency. The fair dominance of government representatives in Salacgriva port Authority board marks a barrier that can prevent discussion on the private stakeholder interests and impede larger private sector involvement in port activities.

The overall relation between stakeholders in Salacgriva port is rather interesting. With the exception of port authority which is directly subordinate to governmental institutions, only cargo carriers (from the side of maritime trade in the port node) are subject to inspections by the government-subordinate agencies. Stevedoring and agent companies are exclusively related to the port authority. Salacgriva port authority is regulated by the central government, simultaneously having contracts with maritime trade representatives. This type of partial connection highlights the role of a mediator that Salacgriva port authority holds, linking governmental interests with the pressures of maritime trade.

3.4. Salacgriva port financing

Along general lines, ports in Latvia are centrally governed and the Law on ports (1994) is the main legislative act that establishes their operation. According to the regulations, the funding of port authorities is formed by port fees, service charges, lease payments of port land and port fixed assets, private investment, donations and grants from the municipality budget in cases when port authority is a municipality institution (*Law on ports 1994*). As port infrastructure maintenance requires large financial input that most frequently exceeds the port capacity, additional opportunities to attract investment are looked for.

In the current model Salacgriva port is said to have no profit, no core capital or share capital (Konsorts, 2008). Since Salacgriva port is the local municipality institution, its budget is partly maintained by the municipality. Although the municipality funding is stable and reliable, it is often restricted in its amount; however, municipality financing is a very useful tool in cooperation financing projects, where the project applicant must provide part of the necessary funding for project implementation and the rest of the funds are provided by institutions, such as EU or the national government (Witteveen+Bos, 2006). In relation to the previous chapter, where Salacgriva port governance system was discussed, it appears that central government bodies (The Cabinet of Ministers, Ministry of Transport and the local municipality) have a relatively great power over the operation of Salacgriva port, also due to the financial support that this port receives from the local municipality.

International institutions often are the source of additional funding for ports. Rather frequently the funding for infrastructure development projects is found in international funds, such as European Union (EU) grants and projects, European Free Trade Organization (EFTO), EEA Financial Mechanism, Norwegian Financial Mechanism etc. As priority sectors of most of these institutions are environmental protection, pollution prevention and reduction, human resources as well as public service capacity strengthening, port infrastructure development can, with the adequate imagination of the project authors and project specification, be considered as a priority sector. Specific examples in this situation are Short Sea Shipping and reduction of inter-European road congestions, which are, among others, a great priority in the overall EU policy.

3.5. Salacgriva port in local policy documents

Regardless the previously described overall strategies in port management, competition, co-operation and development, a very important *magnification* has been neglected until now, speaking in terms of microscopy. With its operation on a regional scale, local conditions of a port, above all, are the platform on which the decisions regarding its future are taken. As in several areas on town planning political long-term strategies are elaborated, these documents

will be further analyzed to provide an insight in the official local view-point on the priorities of Salacgriva area and the scene for port operation and development.

There are several planning documents that mention the role of Salacgriva port in the activities concerned – the action plan for year 2008 from Salacgriva district tourism development and marketing strategy for the 2008-2017 period (see – Tourism and marketing strategy, 2008), Salacgriva district Climate change adaptation strategy (see - CC adaptation strategy, 2011), Norh Vidzeme Biosphere Reserve coastal tourism development plan (see - Tourism development plan, 2011), Salacgriva port development program (see - Port development program, 2008) and Salacgriva town and its rural territory development plan (see - Salacgriva development plan, 2004). With two of these documents elaborated in year 2011, three are partly outdated – the latest Salacgriva town strategy was elaborated in 2004, while the Port development program and Tourism and marketing strategy are both dated by year 2008, presenting a pre-economic-recession situation in the area. The new Salacgriva district development plan is currently in progress and its completion is expected in year 2013.

The lack of a document that would more thoroughly describe the current *political* port position is substituted by interviews with the competent port operation officials that are presented later in this research. The analyzed documents, however, provide an important insight in the variety of angles in which Salacgriva port is locally perceived and help to identify the diverse challenges for port operation that have been brought forward by different sectors. An insight in these planning documents, the aims of the document itself and the issues that have been identified in relation to Salacgriva port are presented in table 3.5-1 and table 3.5-2.

Table 3.5-1 Summary of partly outdated local planning documents; the scope of Salacgriva port

Document title	Scale	Year / Time period	Concept of the document	Port in nature and environment	Port in economic development
Salacgriva town and its rural territory development plan	Local	2004	To present a background information on the existing situation in Salacgriva town and its rural territory. Natural, social and economic capital and opportunities are described.	Ice aggregation in the springtime between the breakwaters; port is an object of cultural environment; the visual attractiveness of Salacgriva port has been impaired by the expansion of fish processing plants on both sides of the river; due to Salaca as a sensitive biotope and a salmon-spawning river, loose cargo handling is allowed only with the necessary infrastructure; average navigable period is 11 months.	The port area use must be improved for it to be attractive for tourism; port must become a vital component of the town life; against the expectations, Salacgriva port has not propelled emergence of new wood-processing plants in port area; the need for co-operation with adjacent yacht ports; competition with Skulte port depends on activities of freight senders and stevedores; <i>closed</i> warehouses are necessary to increase port attractiveness from the point of view of cargo senders and receivers; need for breakwater reconstruction.
Salacgriva district tourism development and marketing strategy	Local	2008 / 2008 - 2017	To display the tourism potential of Salacgriva town and its rural territory and elaborate perspective tourism development document that would provide for a coordinated action of interested parties.	A symbol of the town	Economic development of town is determined by port; priority in town development; yacht port; leisure boat rides from the port; yacht port does not interfere with the commercial port activities; perspective object for tourism.

Salacgriva port development program	Local	2008 / 2008-2013	To improve Salacgriva port competitiveness among the Baltic Sea Region ports, gain stabilization of the economic situation of the port and its development; to create premises for a successful future port development.	Seasonality in port operation	Small ports are important for a regionally balanced territory development; the need to reconstruct the obsolete port infrastructure and improve the infrastructure for yacht tourism development; lack of available financing for those port development projects that are crucial for further port operation; a need to increase the human resource capital, gain new knowledge and skills; port operation diversification.
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Table 3.5-2 Summary of recent local planning documents; the scope of Salacgriva port

Document title	Scale	Year / Time period	Concept of the document	Port in nature and environment	Port in economic development
Norh Vidzeme Biosphere Reserve coastal tourism development plan	Regional	2011 / 2012 - 2020	A tool that can help to ensure sustainable tourism development. It analyzes territories, seeks solutions to implement tourism development opportunities and prevention development obstacles.	Entertainment events in the port aquatorium; place to get acquainted with fishing traditions.	Yacht tourism development; port as an important infrastructure element; potential of commercial passenger transport.
Salacgriva district Climate Change adaptation strategy	Local	2011	To adapt to global climate change impacts at a municipal level and reduce greenhouse gas emissions.	Port is threatened by flooding in spring from the melting snow and ice.	Pier and berth reconstruction and channel dredging are the prerequisites for port development; opportunity to develop new berth and cargo processing area on the left bank of the river.

Issues related to port in natural and ambient environment are presented separately from economic considerations that affect Salacgriva port. Although the policy documents concerned have various aims, many opinions on the port role and potentials match, emphasizing the most pronounced issues. For example, three out of five documents mention the seasonal character of port operation (navigation is limited in winter) and danger that melting snow and ice in spring impose on port infrastructure. From the social perspective, Salacgriva port is not only perceived as an important cultural object and town symbol – its aquatorium hosts entertainment events in canoeing and raft competitions.

The economic approach to issues of Salacgriva port and its potential, however, is double-sided. On one hand, majority of policy documents mention the need for improved yacht services and indulgence to tourism demand on the shore, while on the other hand, the need for new warehouses and port operation diversification prevails. Although Tourism and marketing strategy states that commercial port activities do not interfere with the interests of yacht service providers, this conflict seems foreseeable.

The restricted access to financial assets and lack of investment stands out among all the issues when comparing Salacgriva development plan from 2004 and the CC adaptation strategy from 2011 – both of these documents identify the need for breakwater reconstruction, yet even the information from the latest document does not present concrete construction plans. The need for Salacgriva port infrastructure reconstruction prevails, whether the main activity is to commence passenger transportation services, attract new stevedores through better equipped storage spaces or to increase cargo turnover - port entrance canal with both piers must be reconstructed to provide for a proper movement of sediments.

As it was anticipated, tourism strategies emphasize the potential for port to increase the yacht tourism activities, improve port area attractiveness through former fish-processing plant regeneration, new *closed* warehouse construction and port area use re-planning. Although most of the planning documents, considered here, mention the need for breakwater reconstruction, only Salacgriva port development strategy considers the need to diversify types of handled cargo. Among local businesses there is a great emphasis on tourism, which also reflects upon policy aims – in the period when only one common development strategy has been elaborated, three tourism-related strategy documents have

been released. Although at the existing capacity port operation does not conflict with yacht tourism and port inclusion in town, if port would increase its capacity (which, in fact, is a prerequisite for its further existence), there is a danger of this commercial area to become unattractive to yacht owners.

3.6. Factors that limit Salacgriva port competitiveness

In cases when calm and cold weather prevails in winter, particularly in the more closed parts of Latvian coastline in the Gulf of Riga, fast ice formation takes place, creating difficulties in navigation. On average 120 - 125 days per year the sea is covered in ice in Gulf of Riga (Sooäär & Jaagus 2007). Each port in Latvia is responsible for its own navigational situation maintenance in winter. In these situations ports with greater financial capacity have more opportunities to provide for their competitiveness, as securing navigation creates great additional costs. Three large ports of Latvia – the Freeport of Riga, Ventspils Free Port and Liepāja Port - are navigable all year round. The geographic location of two of these ports on the Baltic Sea coastline favours their operation as ice-free ports. Although The Freeport of Riga is located in the southern-most area of Gulf of Riga, where ice formation is very intensive, it generally is navigable even in the most severe winters due to its higher technological and financial capacity as far as icebreaker service availability and the intensity of maritime traffic is concerned. Up to this time, there is one icebreaker in Latvia - “Varma” – which was built in 1968 in Finland and was obtained by the Freeport of Riga in 1994 (Freeport of Riga, 2011). This icebreaker is occupied at its highest capacity practically every winter in order to secure navigation routes for the Freeport of Riga.

Most frequently, however, the icebreaker functions are performed by port tugboats. Their capacity is usually only enough to keep the port aquatorium navigable. In cases when cold and calm weather prevails for a longer period of time, the Gulf of Riga can freeze over. There are years when prevailing south – western winds push layers of ice one on top of the other, creating thick piles of ice that build up on the eastern coast of Gulf of Riga and can remain there long into spring, limiting navigation.

Commercial activities in Salacgriva port can be carried out up to a certain level. For small ports it is crucial to ensure that comparably large vessels with high ice classes can be handled - 1A ice class vessels with 5000 dwt have been required by cargo owners in Baltic Sea region (Satiksmes ministrija, 2004). Navigation in winter months is especially important for sawn timber and wood-processing product exporters, as truck traffic in forests after rainy autumns is only possible when the ground is frost-bound. The weather conditions can restrict port operation in winter months, as coastal areas in central and northern Baltic are covered by ice every winter, reducing annual period of port operation. Ice situation has been acknowledged as a very important factor, having a great influence on the competitiveness of Baltic Sea region ports. Even the operation of Freeport of Riga, which is considered as the most important Baltic transit hub, is in a disadvantaged situation due to the ice condition in winter (Kovacs & Spens, 2006). Each year the period when small ports in Gulf of Riga are passable vary and navigational conditions here are highly unpredictable (Sooäär & Jaagus, 2007; Jevrejeva, 2001). Smaller ports are often isolated for a month or two due to the thick ice cover. Due to ice, the turnover in Salacgriva port is annually reduced by 25% (Konsorts, 2008).

Another issue is the rather peculiar situation in the competition between Latvian ports. In the very beginning of 1990's when regional fishing ports begun restructuring themselves into commercial ports, small ports of Latvia were planned as *satellites* for large ports. Handling of ecologically clean cargos that are typical for regions, such as wood-processing materials, peat, woodchip etc. was planned to be trusted to small ports exclusively to relieve the traffic of large port cities. However, the current trend in port management shows large ports attracting maximum available cargos, investing in bypass road network and new wood handling terminal construction (Konsorts, 2008). These activities contradict the initial setting for national port competitiveness that predicted handling of wood product cargos in small regional ports. Weak legislation environment prevails in this regard – small port competitiveness is greatly restricted by the unbalanced competition, as small ports by law are bound to local wood product cargos and prohibited from chemical and oil product transfers.

3.6.1 Opportunities to improve Salacgriva port competitiveness

Improvements in cargo logistics have a great potential to provide for an optimized port operation. Three large ports that mostly handle transit cargos annually count up to 98% of all handled cargo nation-wide. In the situation when large ports compete with small ports for wood product cargos, small ports handle some 2% of all cargo. With the conflict between port and the city in large agglomerations intensifying, a national cargo *appointment* system seems to be a viable solution for the problem, diverting wood product cargos to small ports, where more space is available and the traffic situation is more flexible. According to Memos, 2004, the importance of a national port policy lies within the ability to define each ports role in a country, providing for a balanced, productive and transparent distribution of available funding. In case of Latvia, where a part of port funding comes from the municipality budget, the share of annual capital for port development can be established on a national level, providing larger budget and appointing the municipalities to invest in ports. Governmental interference is important to provide that financial resource allocation is based on common port policy aims and the allocated investment is enough for port reconstruction and development works, which are often very capital-intensive.

This type of policy improvement would have great benefits in providing more stability in cargo flows for small ports that, in its turn, would allow for long-term profitability predictions and investment in port infrastructure. A guaranteed cargo network, common for all small ports, would not only support long-term development of Latvian ports, but would also support co-operation and prevent a competition among adjacent ports, which is unnecessary on such a small national scale as Latvia. If the cargo flows and port operation pace would be more predictable, it would ease private investment attraction, which is crucial for large infrastructure development projects.

The issue of Baltic Sea port seasonality has been widely discussed and, although increased ship safety requirements with higher ice classes could make a difference in Baltic Sea shipping there is some doubt of whether this market is sufficient enough to set up the agenda for ship-owners for increased ship technical standards. The answer could lie in national subsidies for icebreaker service costs or international Baltic Sea region port cooperation. It has been acknowledged that at the existing capacity (Latvia has one

icebreaker) the icebreaker service is feasible only as far as the Gulf of Riga freezes over. Increased icebreaker availability could change the situation in the gulf, extending the navigable season of small ports. In the Baltic Sea region, there is a long-established tradition to share the available icebreaker capacity – Sweden and Finland, for example, perform an annual cooperation to maintain the navigation in the Bay of Bothnia. There is a cooperation called the Nordic Agreement between Denmark, Germany, Sweden and Finland that maintains the winter navigation in severe winters (Motorways of the..., 2004). For Latvia, it would be very beneficial to join this type of agreement or to create a new agreement with the closest neighbours in Estonia and Sweden, particularly because there are many small ports, not all of which have icebreaker services available. Lithuanian ports are ice-free all year round, so they do not share this issue.

The well pronounced need for infrastructure improvements in Salacgriva port has been an urgent problem for more than a decade, while series of reasons have prevented the development – economic recession, port competition, unstable national market demand etc. No matter which point of view – commercial port development or port as a tourist attraction – will be the official political key for Salacgriva town development in the future, the importance of port infrastructure reconstruction is dominant. Improved port infrastructure is literally the only way for Salacgriva port to improve its performance in cargo turnover.

3.7. The role of Salacgriva port in regional shipping

With a population of 150 million, 500 million tons of cargo is annually transported in the Baltic Sea region. Some of the busiest shipping routes of the world can be found in the Baltic Sea (HELCOM, n.d.). For Latvia as a country with maritime borders in the Baltic Sea, it is the most important maritime market where majority of the foreign trade is performed (Herlin, 2006). On a related matter, most of Salacgriva port maritime trade connections are a part of the intra-Baltic trade.

Crude oil and oil products were identified as the most important categories in Latvian transit volumes by Brodin (2003) reaching 60% of all transit shipments. The three large ports of Latvia – Riga, Liepaja and Ventspils – mostly forward this type of transshipment cargos from the Commonwealth of Independent States (CIS) to the Western Europe and

Scandinavia. Small ports of Latvia account for 2% of all cargo that is handled in Latvian ports annually. Regardless the seemingly insignificant role of these ports in comparison to the amount of the national cargo turnover, these ports are considered important elements for economic development in peripheral coastal regions (Latvian Port Council, 2008). As legal regulations in Latvia establish the main directions for small port operation in fishery product and ecological cargo handling, fish processing and tourism, the opportunities to diversify cargo that is handled in small ports are restricted by legal regulations (Konsorts, 2008). Small ports favour development of local wood and peat processing and export organization, which account for the major part of all export from small ports. It is common for small ports in Latvia and Estonia to handle cargo with low value-added, while large commercial ports handle cargos with higher value-added, such as liquid bulk and containers (Witteveen+Bos, 2006).

3.7.1 Trade routes

There are two major shipping routes in the Baltic Sea (3.7.1-1). One of them connects Russian port St. Petersburg, Estonian port of Tallinn, Finnish ports of Helsinki and others on the Gulf of Finland to Danish straits which are somewhat of a natural bottleneck for ships willing to exit or enter the Baltic Sea. The other connects Danish straits to the German/Polish coast, where ports of Szczecin, Stralsund, Rostock and others are located. Latvian ports are partly incorporated in one of the main Baltic Sea shipping lines. Ships can use the major shipping route halfway into the Baltic Sea, but it has to be altered to reach the Latvian Baltic Sea coast for ports of Liepaja and Ventspils or to enter the Gulf of Riga to deliver at the Freeport of Riga or some of the small ports of Latvia.

Although Salacgriva port has been functional for over 50 years, it claimed its part of the commercial cargo handling market in the beginning of 1990's with more recent development projects raising its capacity at new levels after expansion works in 2004. The period discussed from this point forward is the time after 2004 when the amount of handled cargo experienced an increase up to 50% in comparison to previous 3 years. As it has been mentioned earlier, majority of shipments to and from Salacgriva port are a part of intra-Baltic market with only some of them on a wider European level (Figure 3.7.1-2).

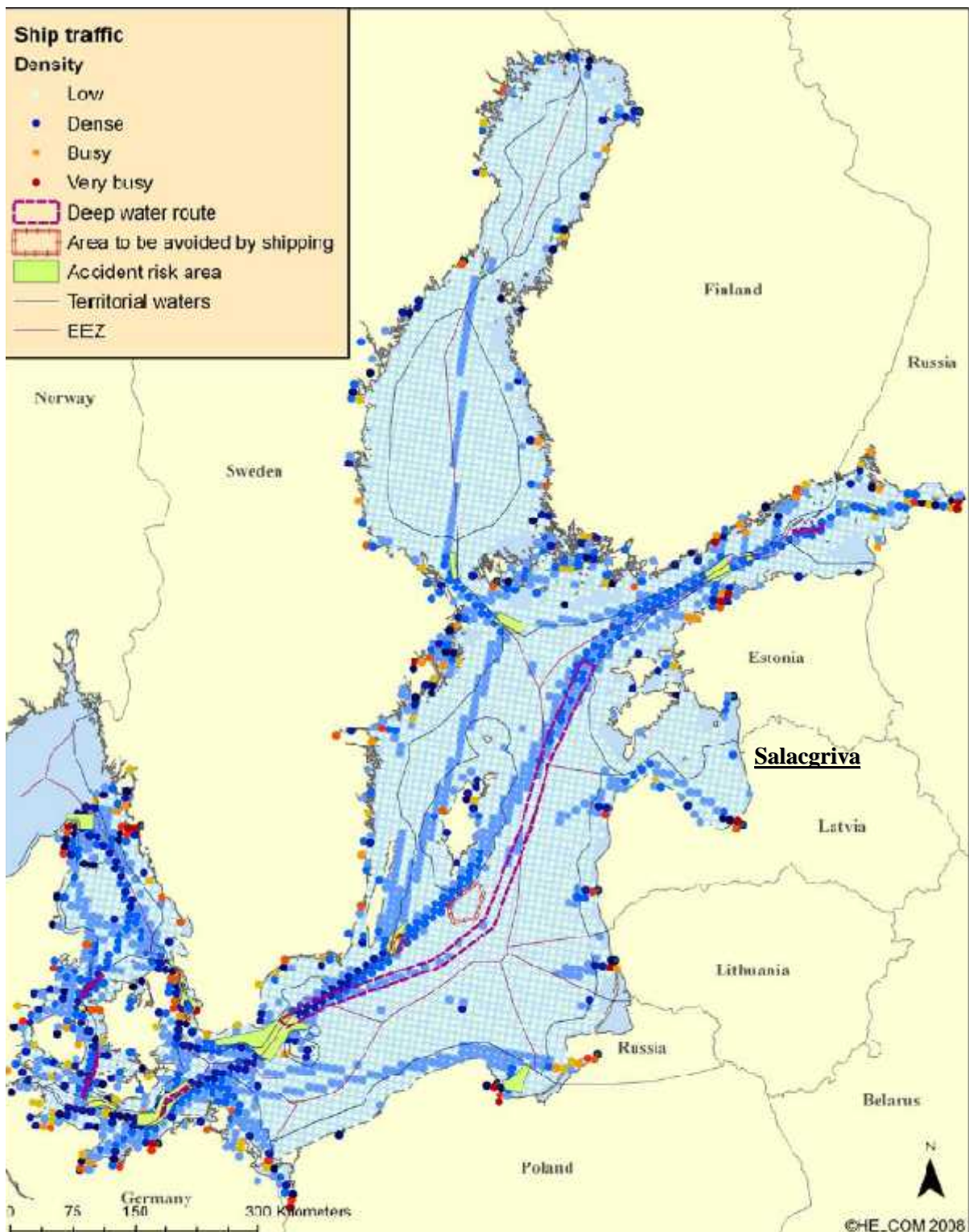
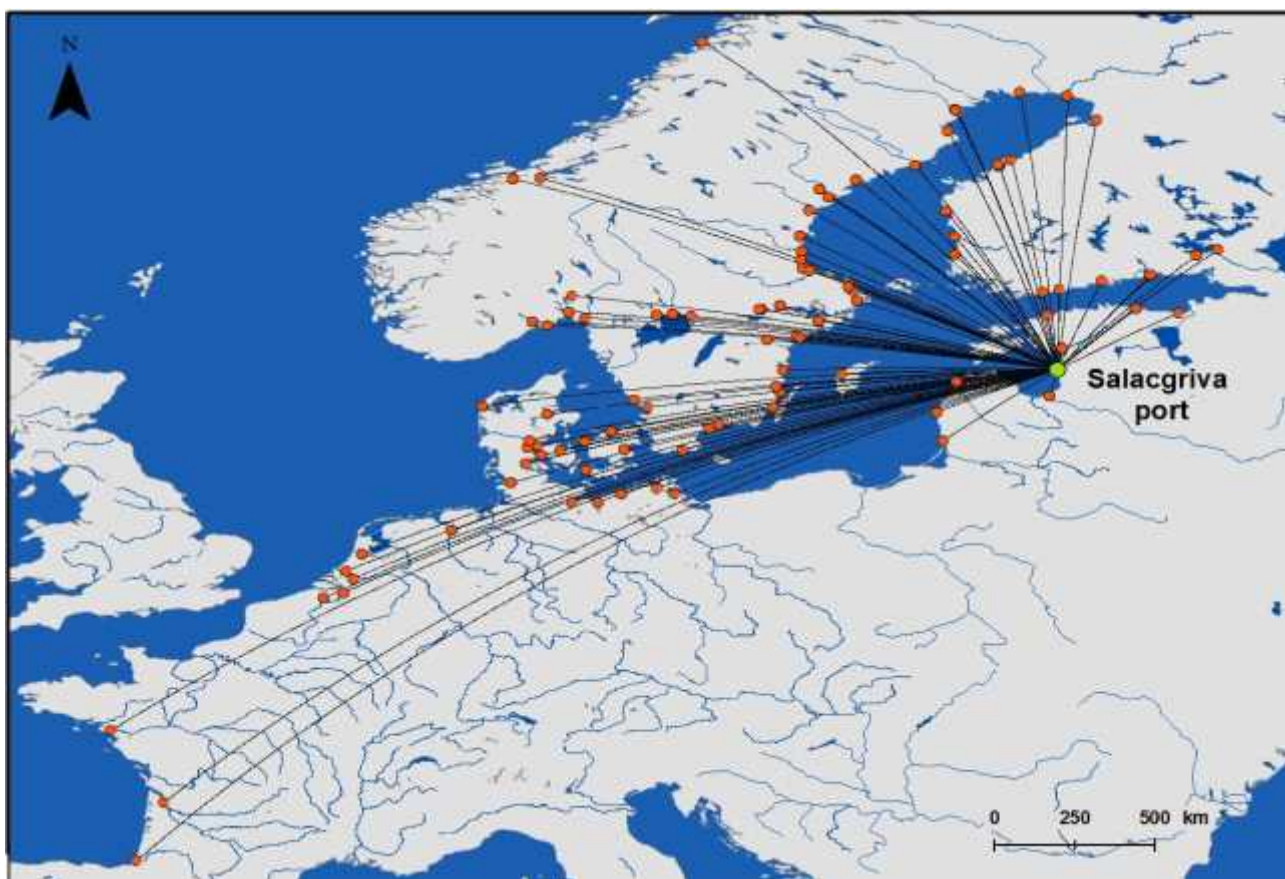


Figure 3.7.1-1 Main shipping lanes in the Baltic Sea (the average of number of ships per hour in March 2006) (HELCOM, 2008; modified by author)



*Figure 3.7.13.7-2 Salacgriva port maritime trade connections from 2004-2011
(created by author, base map – EEA, EurGeographics, port data – Salacgriva port
authority, n.d.)*

There is a well pronounced difference in the volume of exported and imported cargos. In the 7.5 year period from 2004 until the august of year 2011, Salacgriva port received 200 cargo shipments from 46 ports. Meanwhile, 884 cargos were sent from Salacgriva port to approximately 100 ports on a European scale. As small ports of Latvia do not usually handle liquid bulk, such as oil and chemicals, nor containers, small ports generally export bulk cargo - wood-processing products and peat – and import construction materials.

3.7.2 Exports from Salacgriva port

Most frequently annual cargo turnover data of port operation is presented when port activity is described. Small ports in Latvia handle comparably small amount of cargo - Salacgriva port annually attends to an average of 140 ships carrying 55‘000 tons per year.

In comparison, port of Rotterdam, one of the largest ports of the world, annually attends to approximately 30'000 ships (Port of Rotterdam, n.d.(a)) that carry an average of 400 million tons of cargo (Port of Rotterdam, n.d.(b)) per year. The Freeport of Riga, which is the largest port in Latvia, handles 30 million tons of cargo annually, attending to 4000 ships per year (Freeport of Riga, 2011). On the global stage of large ports attending to inconceivable amount of ships and handling immense amount of cargo daily, it has been decided to compile several years of operation of Salacgriva port to present, more importantly than annual statistical data: 1) the most important types of incoming and outgoing cargo; 2) the most frequent destination and sender ports; 3) the time-series of Salacgriva port connectivity.

Ports that have received more that 50'000 tons of cargo from Salacgriva port in the 7.5 year period (January 2004 - August 2011) have been aggregated in Figure 3.7.2-1. It can be seen that wood-processing products that include woodchip, firewood, pulpwood and logs form the vast majority of all exports from Salacgriva port. Most of these cargos are produced locally, using the natural resources of the captive hinterland. Although peat is the second most common exportable cargo from Salacgriva port, only Papenburg port has received more than 50'000 tons of this cargo in the established period of time, indicating a considerably long-term trade.

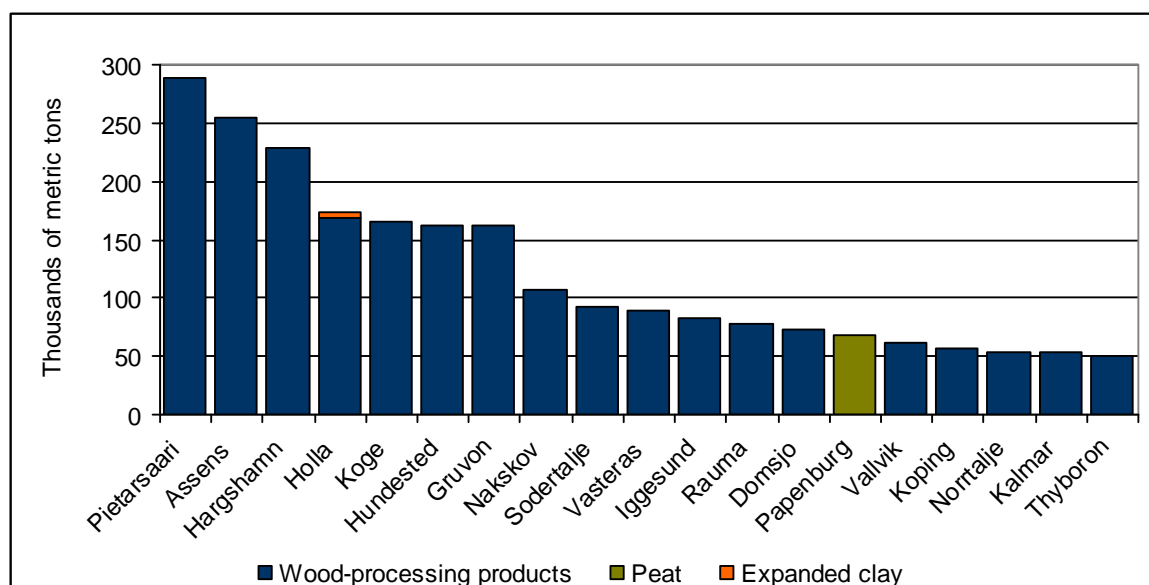
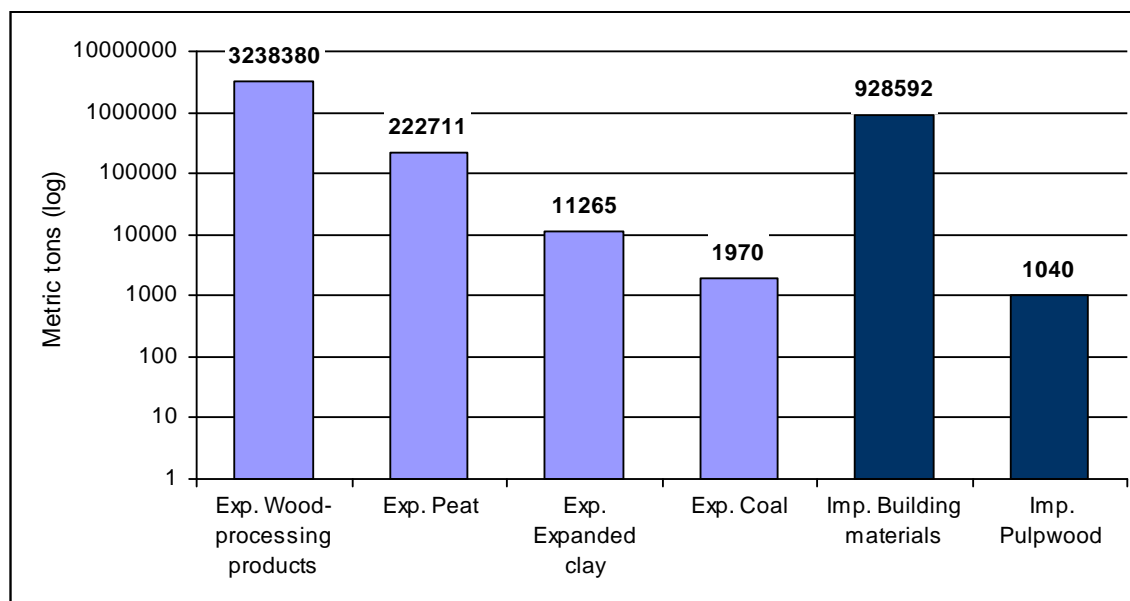


Figure 3.7.2-1 Ports that have received > 50'000 tons of cargo from Salacgriva port in 2004-2011 (created by author)

An overall chart (Figure 3.7.2-2) of exported and imported cargos is presented below to show the total amount of handled cargo. This chart emphasizes the dominance of wood-processing products in outgoing cargos, shows building materials as the major type of incoming cargos and stresses the situation when a dominant mono-type of cargo prevails. Considerable risk is connected to a specification of this type, as even the slightest changes in market demand have the capacity to have negative impacts on Salacgriva port. For an easier perception, cargo amount is figured in a logarithmic form.



*Figure 3.7.2-2 Various types of handled cargo in Salacgriva port in 2004 - 2011
(created by author)*

A time-series of maps that represent annual cargo shipping destinations from Salacgriva port allow for a comprehensible demonstration of the existing patterns (see Appendix A 1). In the first year after the expansion in 2004, Salacgriva port sent 78 cargos to 29 ports. Year 2005 saw a considerable increase in the amount of handled cargos with 116 ships sent to 35 ports. 105 cargos were shipped to 27 ports in 2006, while in year 2007 an overall count of 128 ships left Salacgriva port headed to 33 ports in the Baltic Sea Region and wider Europe.

Appendix A 2 presents cargos that were forwarded from Salacgriva port to their destination in years 2008 and 2009. These two years show expansion of Salacgriva port connection network in a westward direction, with three French ports added to it. 4 cargos

of peat were transported to these ports in the 2-year period; overall 136 ships left Salacgriva port in 2008, heading to 29 ports, while in 2009 Salacgriva port sent 114 ships to 39 European ports. 36 ports were the destination of 136 cargos sent from Salacgriva port in 2010; while in the first eight months of year 2011 there were 23 ports that received 71 ships from Salacgriva (see Appendix A 3).

The maximum value of annually sent cargos – 136 - is the same in years 2008 and 2010, but the quantity of ports that received these cargos are 29 and 36, respectively (Figure 3.7.2-3). Similarly, there were 29 destination ports in years 2004 and 2008, but the amount of sent cargos differ by 60%. Judging from time periods 2007-2008 and 2009-2010 it seems that the amount of sent cargo has a tendency to increase with a decrease in the quantity of destination ports – more cargos are sent to the same ports, however, this data is too insufficient for comprehensible conclusions. The trend of more cargos being sent to fewer ports (year 2008 in comparison to 2007; year 2010 in comparison to 2009) can be partly explained by crystallizing of the most convenient routes for specific cargo types so that in later years they could be further employed at a greater intensity. Overall, it can be seen that the dependency between the amount of sent cargos and the count of destination ports vary greatly from year to year and no fundamental overall trends can be observed from this data.

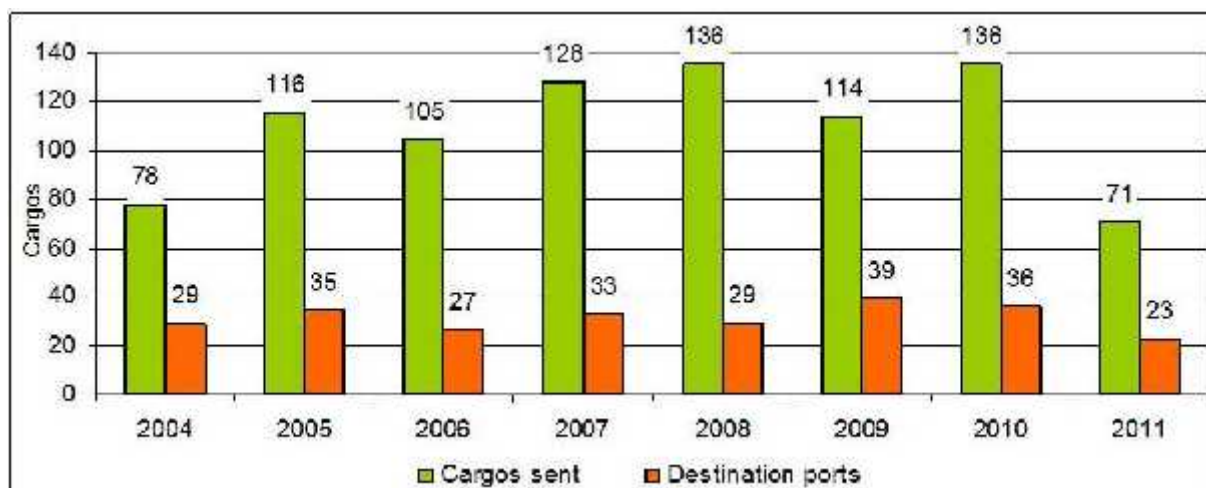


Figure 3.7.2-3 The dynamics between the quantity of annually forwarded cargos from Salacgriva port and the number of destination ports (created by author)

Over the period from January 2004 to August 2011, Salacgriva port experienced rather inconsistent dynamics in the turnover and destinations of exportable cargo. Although after port expansion in 2004, it saw an increase in cargo turnover, later data show fluctuations in both values. For a port that is still seeking its place in regional shipping, however, it seems acceptable, especially considering recent changes in global economy and fuel prices.

3.7.3 Imports in Salacgriva port

Figure 3.7.3-1 shows ports that have sent the vast majority of cargos to Salacgriva port over the time period from January 2004 to August 2011. With exports exceeding imports fourfold, the threshold of 20'000 tons of cargo was chosen to figure the most frequent cargo senders. The chart shows building materials, which include chalk, expanded clay, gravel, lime and asphalt, as the dominant type of importable goods. It can be clearly seen that the ports, forwarding cargo to Salacgriva port, are located relatively close to Salacgriva (Appendix A 4 and Appendix A 5). 5 out of 12 ports that imported more than 20'000 tons of cargo in Salacgriva port are Latvian ports, while 2 are located in Estonia (Parnu and Tallinn), 3 in Denmark (Koge, Hundested and Nakskov) and there is one Lithuanian and one Russian port. With an exception of one shipment, carrying pulpwood, exclusively construction materials are entering Salacgriva port (Figure 3.7.3-1).

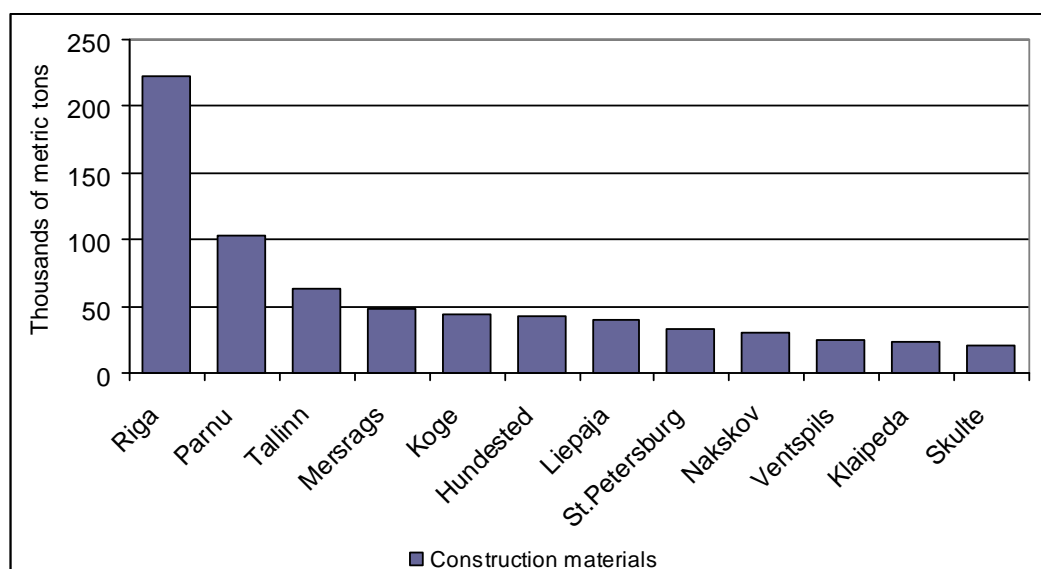


Figure 3.7.3-1 Ports that have sent > 20'000 tons of imported cargo to Salacgriva port in the period 2004-2011 (created by author)

A time-series of maps that represent the annual Salacgriva port connectivity are presented in Appendix 4 and Appendix 4. In the year 2004 Salacgriva port received 7 shipments from 3 ports. A marked increase in both – port connectivity and cargo turnover – took place in 2005, 2006 and 2007, when 30, 66 and 54 cargos entered Salacgriva port from 17, 23 and 18 ports, respectively. The following year (2008), on the contrary, experienced a great fall in both – port connectivity and turnover. In this year total of 4 cargos were received from 3 nearby Baltic Sea ports. 7 cargos from 4 ports were handled in 2009 with a larger increase in 2010 when 20 cargos were received from 14 ports. In the first eight months of 2011 Salacgriva port received 12 cargos of various construction materials from eight Baltic Sea Region ports. If one compares the geographic proximity of imports and exports of Salacgriva port, it is self-evident that the exports are on a much wider scale than imports that are more limited to adjacent ports (see Appendix 5).

The quantity of annually received cargo in Salacgriva port varies greatly (Figure 3.7.3-2) with 2006 and 2007 as the most successful years for import. It seems that in these 2 years the relatively similar quantity of connection ports might indicate an initial emergence of a permanent trade with some of them. This scenario was interrupted by the economic recession that had very negative consequences on Latvian economy and trade, which is also responsible for the rapid decrease of imports in Salacgriva port in 2008. As the national economy is still struggling to recover from this recession wave, there has not been a regular substantial increase in received cargos in Salacgriva port.

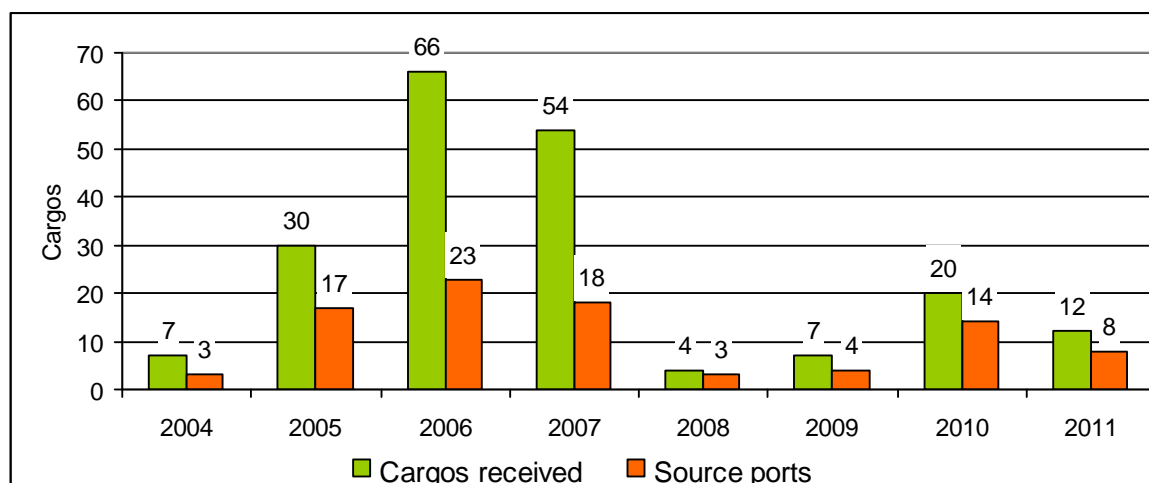


Figure 3.7.3-2 The dynamics between the quantity of annually received cargos and the number of source ports in Salacgriva port (created by author)

The clear dominance of exports over imports and the high level of fluctuations in quantity of cargos that arrive in Salacgriva port show the unbalanced situation within which it functions. The lack of a stable demand for cargos that are imported in Salacgriva port limits its operation. As the port concerned is a landlord port, stevedoring companies that operate in Salacgriva port define its turnover. If stevedores for a variety of reasons do not fully employ their cargo handling capacity, the port suffers from non-received port fees which are an important source of income.

3.7.4 Hinterland routes

Hinterland concerns an “area over which a port draws the majority of its business” (Notteboom & Rodrigue, 2007, p. 52). Hinterland can not be perceived as a static entity – influenced by economic changes, seasonality, infrastructural bottlenecks, changes in transport policies and many others, the morphology, functions and status of a particular hinterland varies greatly over time, verifying hinterland as a dynamic phenomenon (Notteboom & Rodrigue, 2007; Hoyle & Charlier, 1995).

With the hinterland concept changing in line with developments in global shipping, e.g. containerization, three basic sub-components of contemporary hinterland are identified: 1) the macro-economic hinterland as a matter of transport demand; 2) the physical hinterland as a matter of transport supply, providing the transport infrastructure for freight movement; 3) the logistical hinterland as a matter of flow organization and progression in the existing macro-economic and physical settings. Intermodal transportation is important when the physical hinterland is discussed - through their connections ports interlink global producers and suppliers to regional consumers. Inland transportation network development and performance set up conditions for port competitiveness (Notteboom & Rodrigue, 2007; Ducruet & Van der Horst, 2009). In this setting bulk cargo, unlike other types of cargo whose transportation chain is long and complex, often still has direct links with ports, thus the logistics chain is shorter (Notteboom & Rodrigue, 2007).

With the vast majority of hinterland research linked to gateway ports and container forwarding, a different approach is needed when loose cargo forwarding is discussed. Although bulk cargos are also handled in hub ports next to various other cargo types and

the same hinterland connection system is used to distribute various freight types, in smaller peripheral ports bulk cargo handling often is the dominant business and hinterland connections are limited to the bulk supply and demand. Heated discussions among scholars have led to a partial opinion that in advanced societies in the context of intermodalism the relevance of hinterland as such has diminished. In developing countries, however, the transport network development is belated, which is why in these regions the hinterland concept itself and the port-hinterland relations are still relevant (Hoyle & Charlier, 1995). Proceeding with developing economies and peripheral ports, Brooks (2010) emphasizes two characteristics of peripheral ports – a limited domestic market and a remote hinterland, over which considerable inter-port competition takes place. In case of Salacgriva port, a range of 3 ports serves an overlapping hinterland – in addition to Salacgriva, another Latvian port of Skulte in a 50 km proximity and Estonian port of Parnu in a distance of 70 km compete for their business in a rather limited territory (Figure 3.7.4-1).

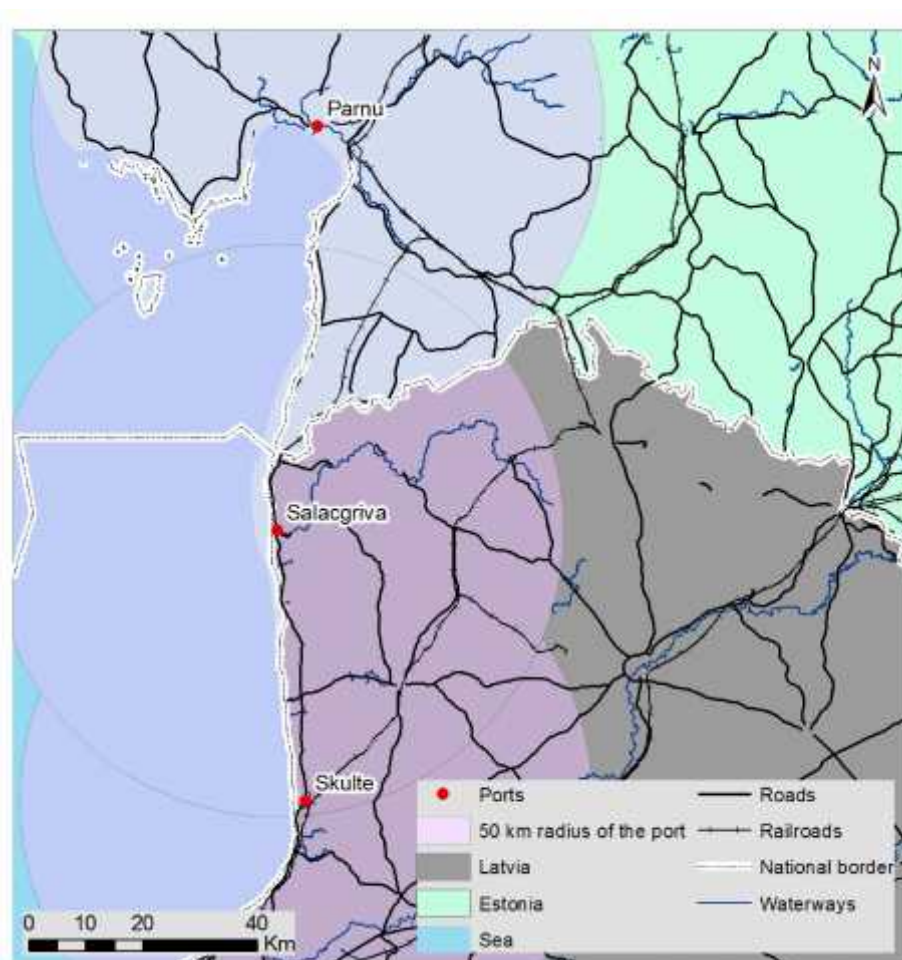


Figure 3.7.4-1 Salacgriva port hinterland accessibility and its nearby ports (created by Soms, K., data from EnvirotechGISLatvia9.2)

At this point the concept of port concentration should be revealed, which involves reduction of the number of effective ports as a result of an increased relative significance of certain ports that lead to reduced operation of others. Investment in port facilities and linked transport infrastructure can result in port concentration. With port concentration common in the developed world, an opposite trend prevails in the developing countries. Diffusion of port activity, which indicates decline of higher order ports and increased significance of lower order ports that result in an increased quantity of functioning ports, is the most common long-term experience in developing countries (Hoyle & Charlier, 1995).

Salacgriva port competes for its hinterland with two adjacent ports whose technical capacity is rather similar to the one of Salacgriva port. The competition with Parnu port (Estonia) in the last years is mostly for imports of expanded clay which is destined for a processing plant in Estonia. As the distance to the processing plant from Salacgriva and Parnu is the same and after joining the EU, national borders are not a barrier, the most important incentive for the freight forwarders to choose Salacgriva port are the more beneficial port pricing regulations. The competition with Skulte port is mostly for exports, as some freight forwarders have preferred Skulte over Salacgriva due to a more acceptable level of port service. Port authorities elaborate their port regulations and establish pricing standards, which serve as the main factors that determine relationship between competitive ports. In Salacgriva wood-processing product exporters as the dominant market shareholders concentrate their business in port-adjacent areas and most frequently rent storage grounds from stevedores which, in their turn, have lease agreements with port authority. As Latvia is rich with forests, as long as international market demand for wood-processing products remains high, there is enough capacity to cope with the demand from the perspective of suppliers.

3.7.5 Prospective changes of the role of Salacgriva port in regional shipping

General provisions for the shipping of inter-Baltic Sea region until year 2020 expect an increase of cargo flow of 64%. The intra-Baltic trade is expected to grow even more rapidly, growing by 83% by the year 2020. This rise in the amount of handled cargo, however, does not indicate a rapid increase of small port operation – the main anticipated contributors are Russia with its oil exports and both - Norway and Sweden - that are expected to export great amounts of iron ore and forest products (Saurama, 2006). The port

of St. Petersburg is one of the biggest ports in the Baltic Sea with the shipping line that connects this Russian port with the Danish straits being the busiest route in the Baltic Sea already in 2006 (Figure 3.7.1-1).

Specialization on a particular market niche is common in the operation of small Baltic Sea region ports; however, this concept should be further applied to provide a more successful integration and operation of these small economic centres in the regional shipping and strengthen their role in local economy. Baltic Ports Organization as the facilitator of regional port co-ordination of the Baltic Sea has published recommendations for small and medium sized port development, which, among others, emphasize: 1) a closer co-operation with local businesses to attract additional cargos to the port; 2) partnership with adjacent ports that can result in a production of more complex goods; 3) port promotion to the local community to provide for a societal support for the port (Rozmarynowska & Ołdakowski, n.d.).

Salacgriva port performance was less than 60% of its capacity in year 2008. With port operation reduced in the more recent years, its capacity was used by even lesser extent. It is crucial to improve the technical parameters of Salacgriva port by increasing the depth of port canal, constructing new storage spaces and, most importantly, to reconstruct the breakwaters. They were initially built in an inappropriate manner and disturb normal sediment flow, providing for continued sediment accumulation in the port canal. This process reduces the depth of navigable waters in Salacgriva port territory, hindering the situation for ships that would be willing to enter Salacgriva port. These are the prerequisites that must be materialized in order to increase the importance and competitiveness of Salacgriva port in regional shipping. Although Salacgriva port was one of the first of former fishing harbours in Latvia to transform into a cargo handling port, ports that followed this example later have superseded Salacgriva in their cargo turnover mostly due to better infrastructural conditions (e.g. breakwaters, canal depth etc.). Now, in order to improve the situation, Salacgriva port must find substantial investment not only to provide its further competitiveness, but to provide its operation in general.

In cases when the role of large ports in global shipping is discussed, it is acceptable to discuss it separately from the local urban developments. The development of small Baltic Sea region ports, however, is tightly related to the development of the particular port

city and the region in general. For this reason earlier in this research various planning documents were compared and further, interviews conducted to clarify the situation in which Salacgriva port operates and is expected to function in the future.

4. Altering Salacgriva port

4.1. Salacgriva port development plan

The port migration out of the town and the general arena of port activities is planned to be on the left bank of Salaca River. This development project does not involve spatial expansion of the port area – the emphasis is placed on port out-migration, leaving parts of the former port area for different developments. In the derelict areas adjacent to the urban settlement no specific development has been planned yet; nevertheless, with investment offers, these territories can be used for manufacturing businesses or waterfront revitalization projects.

The rationale behind Salacgriva port development lies within the provision that it will allow larger vessels to enter Salacgriva port and the new storage spaces provided will allow increasing the amount of handled ships. It is worth noting that the current port operation is restricted to vessels whose length is less than 115 m, while the new development will allow handling of ships that reach 130 m. This advancement will, above all, benefit cargo forwarders, as larger vessels allow more cargo to be transported at a time, reducing the related costs.

Two stages in this Salacgriva port development project are planned. The initial stage includes port dredging, land reclamation, southern breakwater reconstruction, construction of new storage areas and three new berths on the newly reclaimed area (See fig. 4.1-1). Year 2013 is mentioned as the deadline for the first two development stages of Salacgriva port to be accomplished. The second stage is subject to changes depending on the capacity of port operation, financial ability and demand for additional space; port canal deepening and port area expansion is planned by transferring the southern breakwater out to the sea. The timing for the second development stage, however, has not yet been specified.

The current Salacgriva port development plan, although demanding in terms of investment, is already underway. Regular land reclamation has been going on in Salacgriva

port, using a suction dredger to remove the excess sand from the riverbed. This sand is stored in the area, where the new storage facilities and berths are planned, gradually reclaiming land from the sea.



Figure 4.1–1. A scheme of Salacgriva port area (created by Soms, K., base map from Bing Maps Aerial, area division from stenais, I., private communication)

The part of the current Salacgriva port territory that is further planned to be actively used by the port authority, is labelled “Potential operation” in fig. 4.1-1. “Potential operation” (fig. 4.1-1) is an area that will be potentially developed for port operation, while substantial dredging works are planned throughout the port aquatorium. Currently active ship handling operations take place both - on the left and on the right bank of Salaca River. After the first stage of Salacgriva port development project, the most active cargo handling operations are expected to shift to the left bank of Salaca River. On the right bank of Salaca, the fish processing plant is located and, as this area is privately owned, these berths are used mostly in the interest of this plant. Port area extends further behind the fish processing plant and its potential currently is not fully employed.

With the new development, majority of port operations are planned to take place on the left bank of Salaca River. Increased port operation will provide for an increased port-related terrestrial traffic. Until now public streets have been used for lorry traffic. With the planned port development, the pressure on public streets can increase to a critical level, providing for exceeded levels of acceptable noise, vibration and air pollution. This issue has been under discussion for a long time and transformation of a street that is most frequently used for truck traffic into a busier port-feeder street has been chosen as the most appropriate solution.

Several opportunities exist on the ways for this street management – for example, one of the driving lanes can be devoted particularly for trucks, providing for lesser traffic congestion possibility. The decision to devote this street for port-related traffic is based on considerations that it is the closest way to the main road and there is the least amount of adjacent houses that are and potentially will be exposed to increased levels of environmental impacts. The most probable solutions for issues with private property owners involve construction of an acoustic fencing, financial compensations or repurchase of the private property.

The need for this kind of adjustments will most likely become pressing with the completion of the third stage of Salacgriva port development. As the latter stage of development for the greatest part is more of a potential than a real action plan, at this point no real plans are made of how to realize these adaptations. However, it should be kept in mind that already at the existing capacity streets of Salacgriva town are heavily burdened by truck traffic. The new development in port can be perceived by local residents as a considerable threat to their quality of life conditions, creating overall opposition to port operation. It would be beneficial to create concrete proposals on the mitigation measures of this issue and consider their implementation together with the first two stages of the port development project. In this way it would be possible to provide wider community support for port operation, once it becomes evident that the port is conducting activities to improve local environmental and the quality of life situation.

4.2. Opportunities for the derelict port area use

The current Salacgriva port development plan is based on the creation of additional port area that will be provided by land reclamation. The port migration out of the town centre is occurring, to some extent abandoning its former territories that are adjacent to the urban area. As the new development plan intends to remove most of port operations from the right bank of Salaca River, wider territories that are adjacent to urban activities will be left empty. These areas, in their turn, have various directions of development.

First of all, the potential for new storage areas and warehouses should be considered in this regard. Port area is an industrial zone that has been created for the purpose of cargo operations. Maintaining comparably traditional activities in the port area is advantageous in terms of land availability and proximity to the port. As the emphasis of Salacgriva port is on cargo diversification to provide more stability in port operation, a construction of a closed warehouse where storage of cargos that are not destined to be exposed to weather conditions could be organized. However, the issue of connecting the storage facilities on the right bank of Salaca River to the cargo handling facilities on the left becomes significant. Currently private berths on the right river bank can be used for the shipments of these cargos.

Another opportunity regarding the potentially derelict port areas is favouring manufacturing activities. These activities have the potential to create substantial value added in the local society, at the same time providing an additional demand for port services on the understanding that raw materials and / or the complete products are transported by ships. In fact, previously there were cisterns manufactured in Salacgriva port area that were shipped to their destination via ships due to the difficult handling of such objects. As the port has been an industrial area for a long time already, it would be easier to perform commercial activities and manufacturing in these areas as the potential opposition from the community and policy makers is minimal. Port area is well suited for production and the potentially derelict Salacgriva port areas have the opportunity to be developed into an industrial centre of Salacgriva town.

With Salacgriva town a centre of the district, the demand for residential and commercial spaces is increasing. The geographic location of the town in the crossroads

between the river and a magisterial road limits the urban area availability. As Salacgriva port territory is closely adjacent to the urban centre, port out-migration in a seaward direction can provide valuable gains for urban sprawl – the so-needed space. The most important decision in this regard is, whether the port authority is ready to give up a part of its area in favour of municipal interests. The main winners from this development would be the town, as a new territory in a strategically opportune location would be available for town development. The port, in its turn, would permanently lose an area which could have been used in the interest of the port. Waterfront revitalization as a current trend in city-port development is a widespread praxis that provides for an improved urban spatial continuum, quality of life and the attraction of an area. Projects of waterfront revitalization not only improve the visual condition of a derelict port area, but also can be developed in a way that business activities and office buildings replace the former industrial waterfront.

4.3. Functional beauty as a mediator between port operation and tourism

In the concept of functional beauty there is only one reason that allows an object to be considered beautiful – it is the appropriateness to realize the purpose of its construction (Good, 5/25/2006). This fine statement coincides with the anthropocentric approach in theory of functional beauty. The central role in this approach is assigned to the information and knowledge one has about the proper function of an object (Bueno, 2009). Functionalism, according to Good (5/25/2006), is the aesthetic “of the tool and of the machine”, thus it can only explain the beauty of certain installations or technological solutions as industrial tools, among others - ports.

A famous analogy that the wing of an eagle has been shaped by its function lays on the basis of functionalist movement which values functionality of an object as superior over its design (Hansson, 2005; Sullivan, 1896). Consequently, the better is an objects performance, the more beautiful it is. If one speaks in terms of port synergy with town - the potential conflict between commercial port operation and the image of a town – functional beauty is the concept that interlinks both. Salacgriva has been a fishing town for more than a century; at this point no considerable commercial fishing activities are ongoing – cargo operations and yacht tourism are the potential for Salacgriva port. Although the concept of

functional beauty is yet unexplored, it incorporates the solution for the tourism-commercial port debate. The potential of ports through the lens of functional beauty is great. Cargo handling operations, large vessels berthed, ship movement in the port entrance canal – all of these activities, if properly communicated, can be a special treat, a *beauty* if you like, for tourists, as well as local residents. Functional beauty is an opportunity to provide the previously absent communication among commercial port activities and touristic interests in Salacgriva.

To preserve local acceptance of seaport activities the need for an intensive communication of port authorities, mostly with local communities, is becoming more and more common in the port industry. Employment creation and the value added in ports have always been crucial points to justify port development and operation in the eyes of local stakeholders. Recently, however, the expressed local concentration of negative port operation impacts has become more pronounced and takes place due to port regionalization, increased spatial demand and decreased employment demand, thereby providing more opposition to commercial port operation (Dooms *et al.*, 2011). With an increased importance to provide information for the community of the benefits that ports bring to local society, there is one more thing that can be done simultaneously. A more thorough understanding of the processes in ship handling can provide the audience with the necessary background information, which is important in understanding the proper functions of a port as an artifact – accordingly – its functionality. Functional beauty has a great potential in Salacgriva as a town with active commercial port and emphasis on tourism development. Functional beauty deals with technology that exists not only for practical reasons. It can also serve as an attraction. As that “something special”, ensuring peoples interest in a particular place. In a discussion on tourism in coastal areas, most of the ideas, crossing one’s mind are more or less connected to the natural coastal environment – birds, beaches, reefs, water sports etc. Functional beauty is a tool for tourism diversification, broadening the perception of touristic attractions in a new direction.

4.4. The image of Salacgriva town and commercial port activities

Salacgriva has traditionally been a town with well established traditions in fishing and fish processing. Closure of a large fish processing plant and a substantial decrease in the operation of the other, declining fish stocks in the Baltic Sea and the liquidation of the local fishing fleet in the 1990 - 2005 year period changed the situation in Salacgriva substantially. In addition to the loss of jobs, an important industry ceased to exist in its habitual meaning. Salacgriva port took up commercial cargo shipment operations, while the town itself is heading toward environmentally sound, sustainable and responsible development.

However, in the minds of local residents, Salacgriva is still a fishing town. There was a research performed in 2011 studying brands and associations that Latvians identify in connection to 75 towns in Latvia, Salacgriva among them. This research established its port as the most popular wordy association of Salacgriva town (Brencis, 10/2011). An important “point of reference” in the identity of a town is the symbolic meaning of a port (Pinho *et al.*, 2002), which is bound to changes in Salacgriva at this point. With local fishing of a commercial scale no longer active, cargo shipment and marina service activities are related to Salacgriva port in the future.

The image of the town has to change, however. The romanticized perception of the port as the place where small fishing boats were docked has to change into a perception of a port where large vessels are handled and logs and woodchip moved. Salacgriva port is and also in the future will be the means of communicating the image of the town and the district itself to its visitors, neighbors and potential residents. Considerably increased operation of a commercial port in the centre of Salacgriva would undeniably change the image of Salacgriva town. Even more, it would escalate the negative effects of port operation, such as increased traffic, noise, dust, water pollution etc. The mayor of Salacgriva district, however, questions this probability, emphasizing the regional scope and limited amounts of the cargos that are or potentially might be transported through Salacgriva port (Personal communication, 4/12/2011).

Salacgriva port is an object, well-incorporated in the image of its town – it is a well-known infrastructure object, through which local tourism, industry and communication can be encouraged. The prospects of Salacgriva port to develop in such a pace for associated problems to arise are valued as minimal thereby the port is an important core industry which supports operation of linked activities like yacht tourism, logging etc.

4.5. The reasoning behind the commercial scope of Salacgriva port

There are authors that consider that economic diversification will serve as the main reason for port cities to become general cities (Ducruet & Lee, 2006). The most common dynamics in the balance in town-port relationship indeed lead to an inevitable urban dominance in the area, providing for former port urbanization and current port operation diminishing through widespread waterfront revitalization efforts. However, it is not always the case. There are small ports that work to increase their market share and operation intensity, taking the leading role in the port-town relationship. And, although Salacgriva port is not the port where the utmost port dominance prevails, a great emphasis on maintained port operation remains.

The economic benefits from port operation most frequently are the reasoning behind the opinion to support port development and operation. Direct economic benefits include the amount of secured workplaces in the port for local residents, the amount of income tax that is received by the local municipality etc. In this regard Salacgriva port does not “score high”. The approximate amount of 50 people, which is not a substantial amount per se, is the overall amount of people that are employed in port operations, including the port authority and stevedore companies.

Salacgriva port mostly handles local cargos, as wood-processing products form the vast majority of all exported cargos. This is where the secondary employment comes into play. The amount of people, employed in forest exploitation, transportation and wood-processing plants is incomparably larger than the primary employment. Through the specifics of port operation, a great deal of local production activities are supported, leading

the port to a beneficial state, providing for it to be considered the lifeline for the local production, even if initially it does not seem to be this way.

Although the development aspirations of Salacgriva port partly follow the trend of large ports in terms of port out-migration, as the potential port area will be reclaimed from the sea, it resists decreasing the amount of its operation, which is still a widespread trend for small ports. Even if there is a slight possibility that the derelict port areas will be used for waterfront revitalization in the sake of urban sprawl, port activities will not suffer from this development. The port will increase its capacity, gradually leaving the historical port-urban interface. This scenario benefits both – port operation and town development.

4.6. Interview results

Three individual semi-structured interviews were performed in order to establish the opinion of the key decision-making bodies that are concerned with Salacgriva port, its development and issues related to it. As Salacgriva port is a small port, its impact on the national-level economy is not tremendous, while its regional and local significance is great. Topics of the role and meaning of Salacgriva port, the new port expansion plan, development of an industrial port in Salacgriva, where the emphasis in town development is sustainability and nature-friendly management, alongside others, are further discussed.

For a more comprehensive analysis, the topics from all three conversations are described in a combined form in three sections. All responses regarding the more general development of Latvian ports, Salacgriva among them are discussed first. These are followed by the discussion on the current and future issues related to Salacgriva port. For the convenience of the reader, in the following analysis the interviewees are mentioned by their initials: Mr. Dagnis Straubergs, an experienced mayor of Salacgriva district is *called* D.S., the abbreviation for Salacgriva port manager Mr. Ivo Štenais is I. Š., and the president of Latvian Association of Small Ports Mr. Jānis Megnis is *called* J.M.

4.6.1 Latvian small ports and Salacgriva in brief

As J.M. affirms, small port development in Latvia is based on three pillars: the transport of Baltic Sea region cargo, fishing with its related activities and yacht tourism. As far as cargo handling is concerned, the local financial benefits of port operation are not

substantial and merely provide the port with an opportunity to maintain its functions. Fish processing, however, is a human resource-demanding operation that creates the greatest direct local benefits. J.M. and I. . confirmed that the main income (~80%) for Salacgriva port is provided by the port fees, with the remaining part coming from land lease payments. As D.S. and J.M. approved, the cargo flow provides means for port infrastructure maintenance.

When talking about a possible governmental interference in national cargo distribution that could improve small port turnover indices, destining wood-product exports exclusively from small ports, J.M. is sceptical, as governmental interference would not be logical. Also D.S. questions the rationale behind any governmental regulations in cargo distribution, as artificial interference in the market system in such a competitive field as ports does not seem plausible. I. , however, sees the rationale behind this idea. He identifies the lack of a long-term perspective of port development in a national level, as a similar market regulation would provide for a balanced development between the regions of Latvia and be beneficial for regional ports. Wood products that are handled in large ports form an insignificant part of all their handled cargo, while, divided among small ports, it would have a great positive impact on their operation. I. . identifies the opportunity to use economic stimuli to make small ports more attractive for regional cargos. The opinion of J.M. is similar to the one of D.S. in identifying the distance to the port and port fees as of the utmost importance in the competition of ports for cargos.

Discussion on the optimal operation of Salacgriva port provided unanimous responses. As the extent of handled cargo in small ports has a great impact on the potential activities in their adjacent towns, J.M. verified that the amounts of handled cargo can not be increased endlessly. As I. . confirmed, with an increased port turnover, the negative externalities of port operation on the local activities will increase. D.S. rejects the possibility for a greatly industrialized port to form in Salacgriva. His consideration is based on the fact that none of Latvian ports work at their full capacity, thus he questions the ability of Salacgriva port to experience a rapid and expansive development. I. . also questioned the opportunity of Salacgriva port as destined to handle millions of tons of cargo annually. I. . and J.M. identified approximate 600 000 tons of cargo as the optimal amount for Salacgriva port so that a harmonized co-existence with the town would remain.

4.6.2 Current issues in Salacgriva port

J.M. and I. identified the navigation provision in winters as a great problem, particularly in small port operation in Latvia. Port legislation designates port authorities as obliged to maintain navigation in the port area in winter, while the means for cargo ships to reach the port gate theoretically remains the issue of the crew of the ship. No governmental participation in navigation provision in the Gulf of Riga takes place. I. drew similarities with roads, profiteering that the Ministry of Transportation should also provide the navigation in maritime routes. However, as J.M. identified, in the economic situation that Latvia is now in, governmental support in ensuring navigation in small ports is not a realistic idea.

Small ports of Latvia are planning a cooperation that would solve this urgent problem with winter navigation through applying for the EU co-finance and building two icebreakers that could be used to provide the winter navigation in the Gulf of Riga. With the participation of EU, small ports would be capable to find the remaining funding for this project. This would be a great gain for small ports, as last year (beginning of 2011) Salacgriva port was closed for 2.5 months, which had great negative impacts on the financial condition of the port. Fulfilment of this project in an optimistic case is expected to take 4-8 years. Accordingly – the navigation conditions in severe winters remain problematic for the years to come.

When talking about the current Salacgriva port development plan, I. named the breakwater reconstruction as vitally important for a more successful financial and technical performance of Salacgriva port. Dredging as a very expensive operation demands constant financial input, while breakwater reconstruction would decrease the need for it substantially, allowing Salacgriva port to channel the *ex-dredging* funding for different use. I. also emphasized the importance of private investment in terminal construction.

As the new Salacgriva port development plan provides for port expansion, reducing the closeness of port to the town, the issue of activities that are planned in the derelict port areas must be solved. I. admitted that the factories that are located in the port area create the greatest benefits from the municipality through provision of employment and taxes, while the benefits for port are little. Although direct benefits for port from port area lease to production would be little, the port authority considers offering the derelict areas for

businesses, despite the doubt of whether there would be any interest. In cases when factories that are built on the port authority land demand port services to import raw materials and/or export the finished product, the port authorities benefit. D.S. mentioned that, unless the production that is performed in former port areas is directly connected to port service, it would not be viable to have business here, as the land in port areas is rather expensive. According to I. ., Salacgriva port has previously leased port area for factories under the condition that the manufactured goods or raw materials are shipped through Salacgriva port. The issue, however, in this case remains on the topic of whether the port is generally able to provide the necessary services, particularly in winter, if it poses such demands. J.M., in his turn, fully declined the opportunity for a not port-related private business development in derelict port areas, as the construction of factories would be cheaper in adjacent villages, where the land fees are lower. However, he identified the potential for factories that handle and construct large windmills etc. to be developed in port areas, but in his opinion, vicinity of Salacgriva port is not the most suitable place for offshore wind energy generation.

Regarding the issues, identified as crucial in Salacgriva port existence, I. . identifies the need for a more stable port operation that could be provided by larger diversity of exportable cargos. Exports of processed wood products like pellets and woodchip, demand for which has increased in the recent years, could provide for additional stability and income in Salacgriva port. At this point, as I. . informs, the lack of storage spaces limits Salacgriva port from taking part in wood pellet exports from Estonia. The new development will provide for the necessary support in cargo diversification.

4.6.3 Issues in the future of Salacgriva port

Elaborating on the topic of private investment in ports, I. . mentions that the logical development of small ports should be in the direction of increased private participation. J.M. shared his opinion that, after Latvia regained its independence in the 1990's, it was a reasonable decision to create port authorities as municipality institutions. Otherwise, in his opinion, the amount of successfully operating small ports would be twice as less than it is now. Likewise, he mentions port privatization as the next logical step in small port development in Latvia now, when the economic situation is more persistent. J.M. considers port authorities as approaching the stage when their main tasks will be fulfilled. With

public funding, the technical capacity of former fishing ports has been improved to the level of competitive commercial ports and further, when the public infrastructure will soon be in good order and private businesses ready to take up more responsibility, it should be considered to provide them with the authority to do so.

Salacgriva port functions as a yacht port as well, adding another dimension to the Salacgriva port operation. D.S. identified yacht tourism as an important aspect of Salacgriva port and its adjacent yacht port in Kuiviži. In his opinion, no substantial additional effort is needed to provide for yacht entrance in Salacgriva. I. . states that yacht tourism by no means conflicts with the operation of commercial port. However, he admits that the yacht service in the adjacent Kuiviži is more qualitative than that of Salacgriva. The interest of yacht tourists, as he states, in Salacgriva is to enter the centre of a town, while the need for an improved service to cater for these tourists in town prevails. D.S. emphasized the importance for an integrated and balanced development of adjacent ports. According to him, each *household* must have its working area, as well as residential and recreational zones. In this comparison, Salacgriva and its port correspond to the role of a production and industrial centre, while the adjacent yacht ports and small towns could develop as recreational centres.

4.6.4 Summary of the interviews

Despite the factors that greatly limit the performance of Salacgriva port, such as hindered navigation in winter and the poor technical condition with the port pleading for reconstruction, there are several bright development opportunities. Industrial port activities match the image of Salacgriva town much better than primarily assumed. In this regard, it can be stated rather certainly that any local resistance that would oppose port operation is unlikely. Small ports also have a possible solution to their winter navigation problems – they are planning a cooperation project that would allow small ports to gain more independence and stability through purchasing an icebreaker.

Port privatization has been identified as an appropriate scenario for Salacgriva port to accommodate – further port operation is difficult to imagine without increased private investment in berth and storage facility construction. Yacht tourism is an activity that was

mentioned by all interviewees as an additional activity of Salacgriva port that has the potential of providing value added in the local community.

Two out of three interviewees consider governmental interference in wood-product cargo distribution among ports nation-wide unjustifiable, as it would interfere with the fair competition. Besides, large ports have a comparably great influence on the policy decisions that are made in relation to port activities and it seems unlikely for them to decide upon a regulation that would limit their income. Small ports are more likely to be *heard* only if they cooperate to reach their common goals.

5. Concluding discussion

Current trends in port development, translated by scholars, prescribe development of large global ports into super-ports simultaneously with statements on the complete collapse of hub-port concept. Small ports are destined to comply with urban dominance in port areas, while others choose their own track toward increased operation. Although initially the trend of Salacgriva port seemed to be one of a kind, this research provided it is not – even on a national level, there are small ports that have increased the level of their operation substantially and yet remained comparably small.

The initial worries of Salacgriva port growing into an *industrial monster* that will inevitably take over the urban function, have been dissipated. Although further development of a commercial port is planned in Salacgriva, its potential for a manifold increase of turnover is unlikely. Port reconstruction is vital for its continued operation and the new port expansion plan will provide additional space for storage facilities and a likely construction of a wood-processing plant that would provide the port area with the presence of a value added service. The port out-migration will constitute grounds for discussion on the derelict port area use, yet none of the stakeholders have strict standpoints in this regard, thus a constructive area planning seems possible.

In case if Salacgriva port would devolve from public to private governance model, it should seriously consider a more active port administration to provide larger financial investment recovery. With the technical capacity of Salacgriva port approaching its optimal level after the conclusion of the current expansion plan, issues of management will become crucial. In the current situation, the policy in stevedore management and hinterland expansion planning and administration seems rather passive, which reduces the income that is generated in the port.

Increased port operation capacity will inevitably have negative impacts on the transportation system in town, which, although not a high priority for the Salacgriva port authority, is an issue, resolving of which would prevent unnecessary conflicts to emerge.

The port authority should draw more attention to the topic, as, according to the literature and separate case studies, there is a substantial increase in the awareness of local communities of the negative externalities that result from port operations.

The image of Salacgriva town has been and, most probably, in the future will be connected to the port. The image of Salacgriva as a fishermen's town, however, will be transformed into an image of a small industrial port town. Functional beauty is a great term for Salacgriva to hold on to, as the industrial activities of Salacgriva port are visible for the residents, so why not use it in its benefit. Although the new development will provide for a different image of Salacgriva port, it still has a great potential to be attractive both – for recreation seekers and businessmen.

Although not a typical example, the development of Salacgriva port can be considered sustainable, as intermodality, water transport and smart management can provide for a proper growth, with the condition that the port authority adapts improved public communication and conflict prevention practice. Salacgriva port expansion will provide for:

- 1) Improved port technical parameters that will allow cost savings in terms of dredging;
- 2) Increased port turnover will provide larger income to the municipality from the port operations;
- 3) Cargo diversification will provide for a more stable port operation and has the potential to create additional jobs;
- 4) Improved port performance in terms of public communication and involvement can provide for a greater local support for the port operation.

To sum up, small port expansion in the case of Salacgriva will not create substantial and abrupt changes in port-town relationship. As the urban environment has gotten along well with port activities for a substantial amount of time already, a slight change in its operation toward a different specialization is not expected to create substantial inconveniences. However, individual areas where the discussion will incline to the benefit of one or the other remain the responsibility of the decision-making bodies. Their openness

and realistic perception of the future plans are a gain for more balanced port-town integration.

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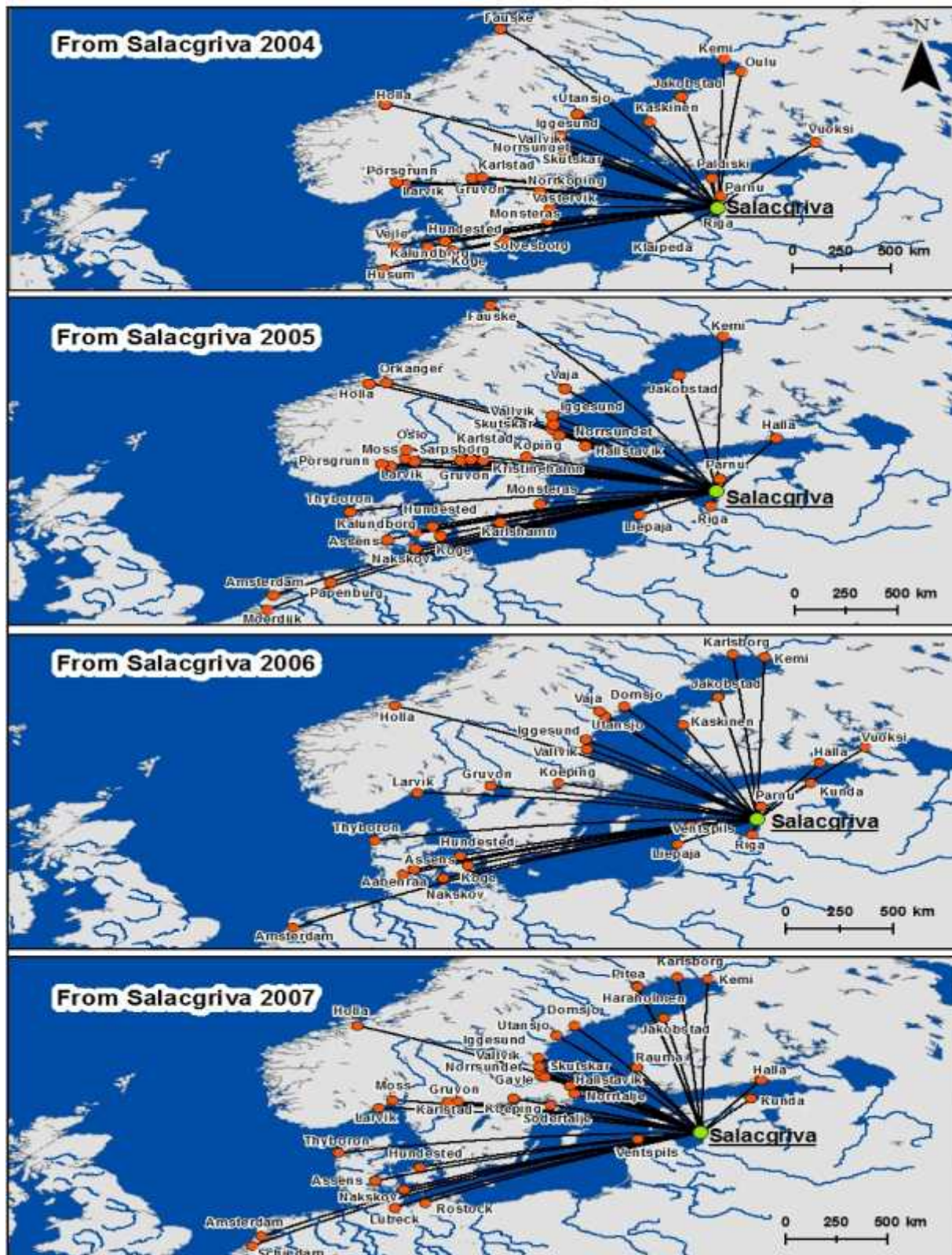
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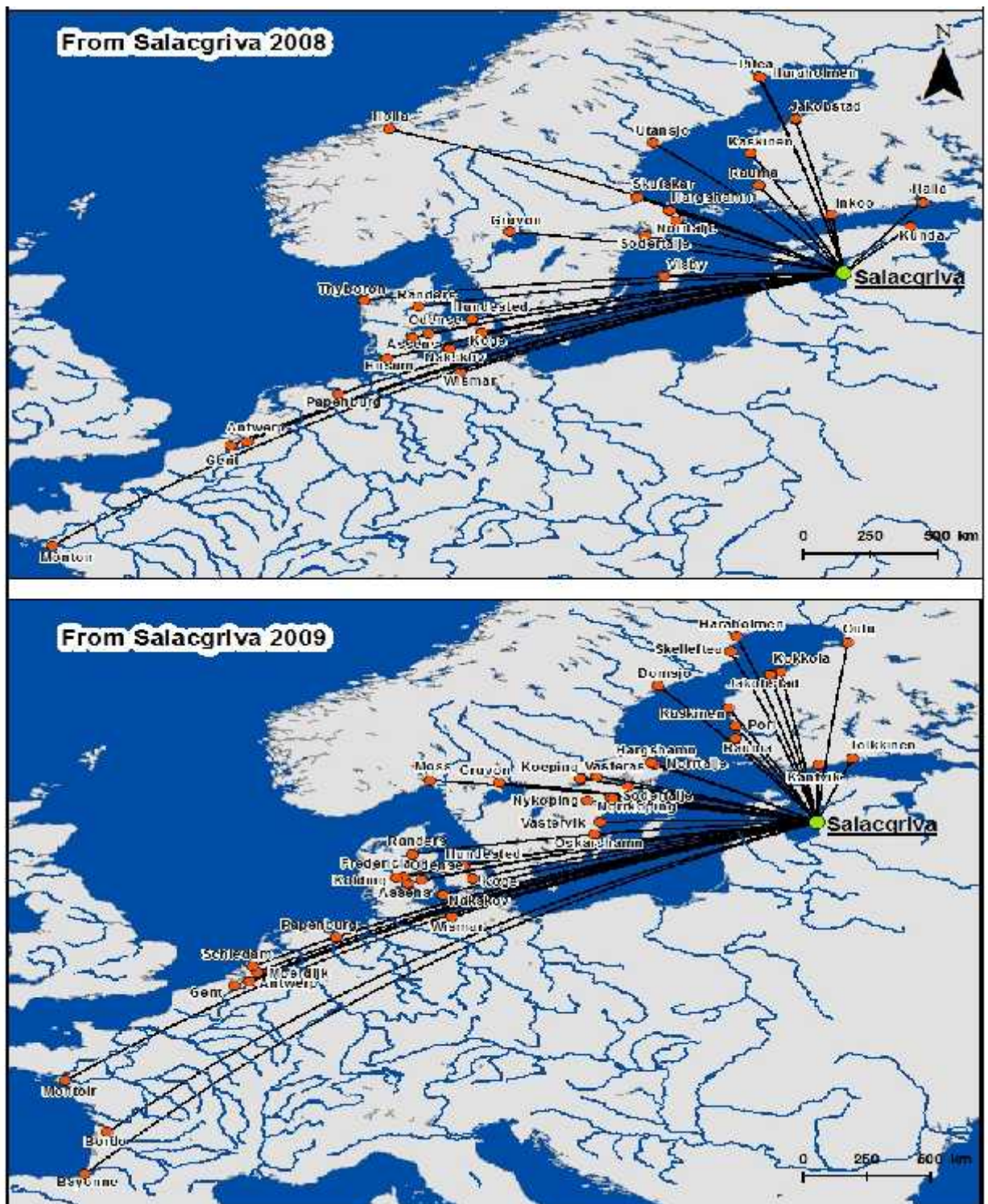
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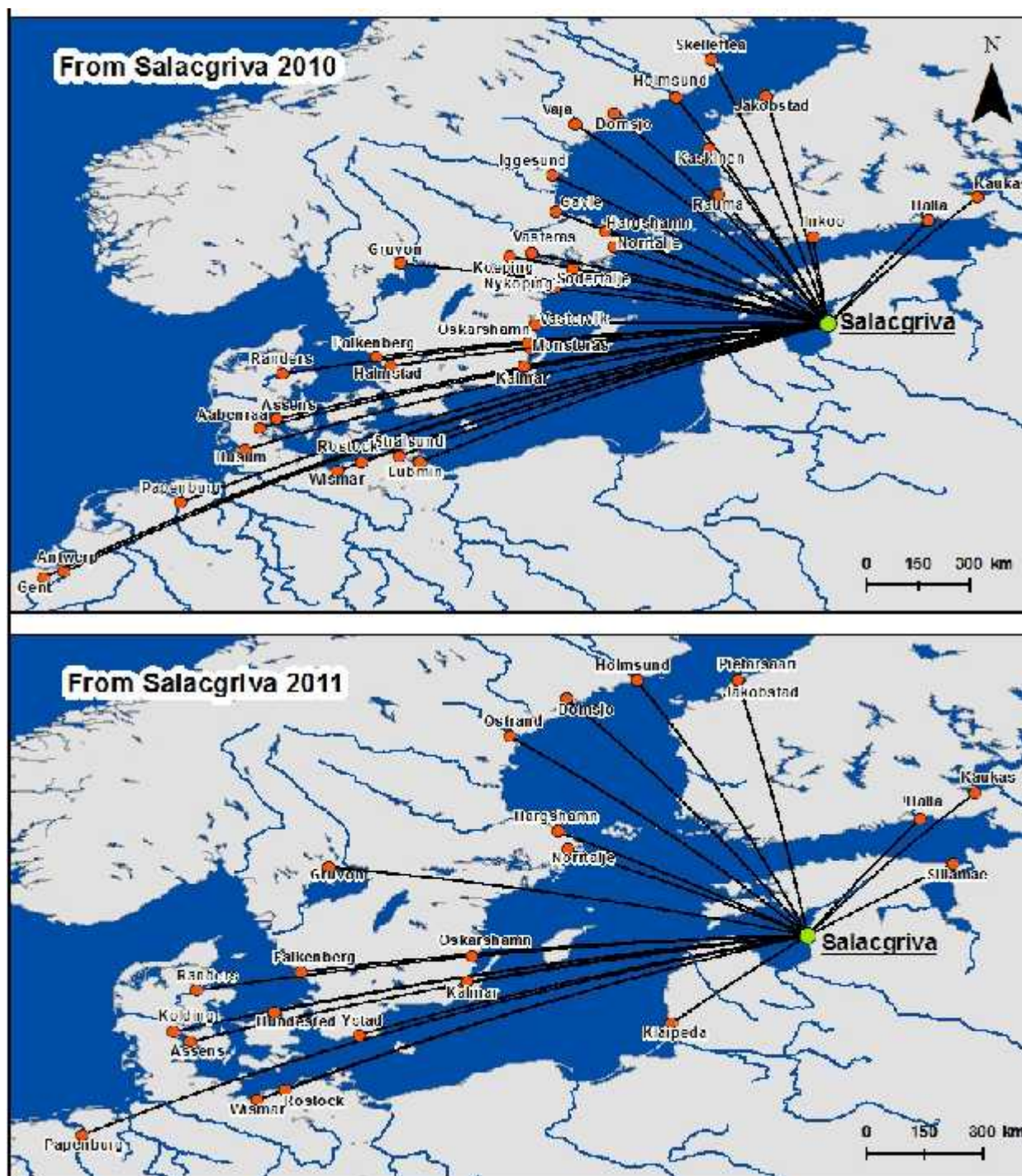
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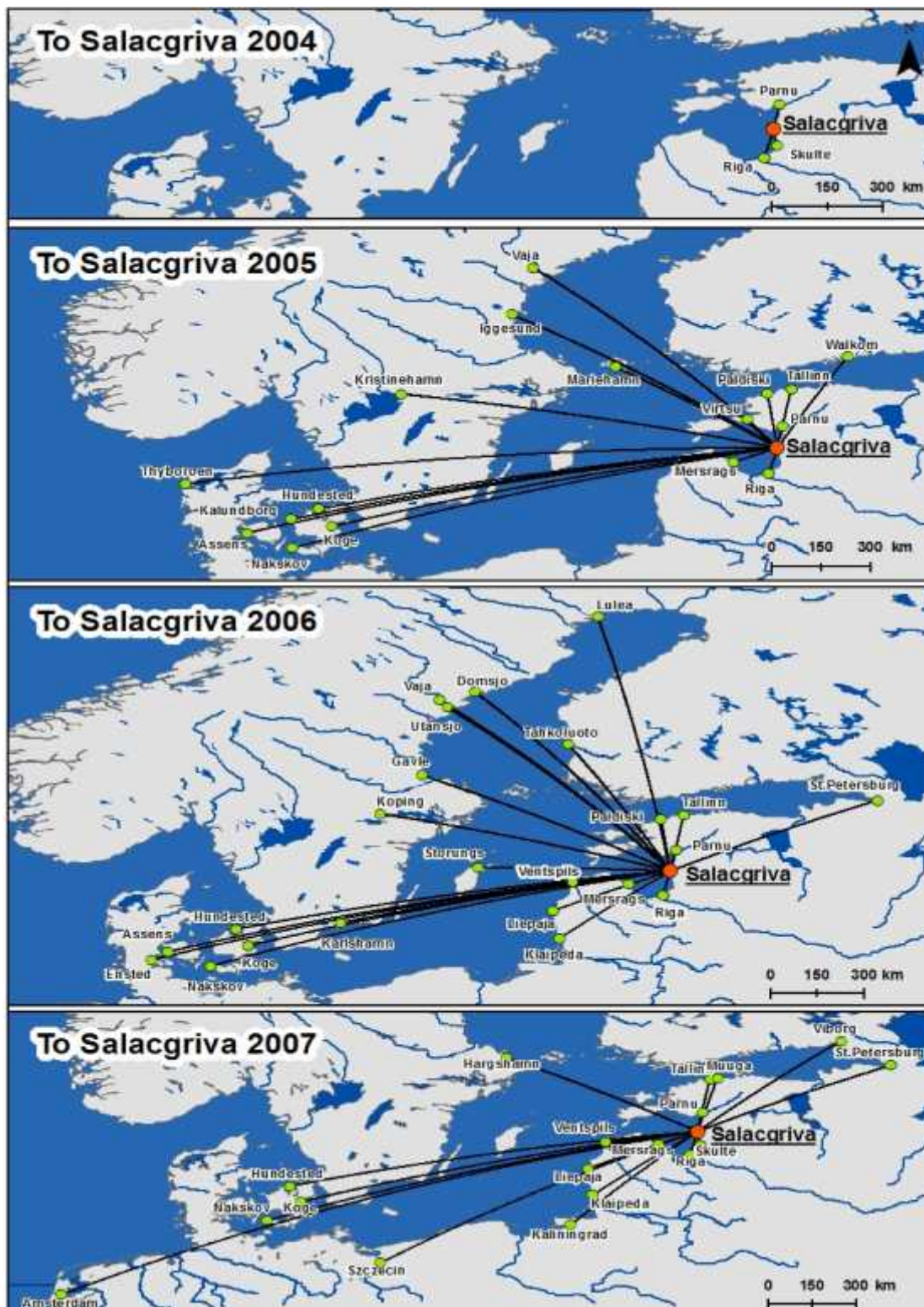


Appendix A 1 Annual cargo shipping destinations from Salacgriva port for the time period from January 2004 – August 2011 (created by author)

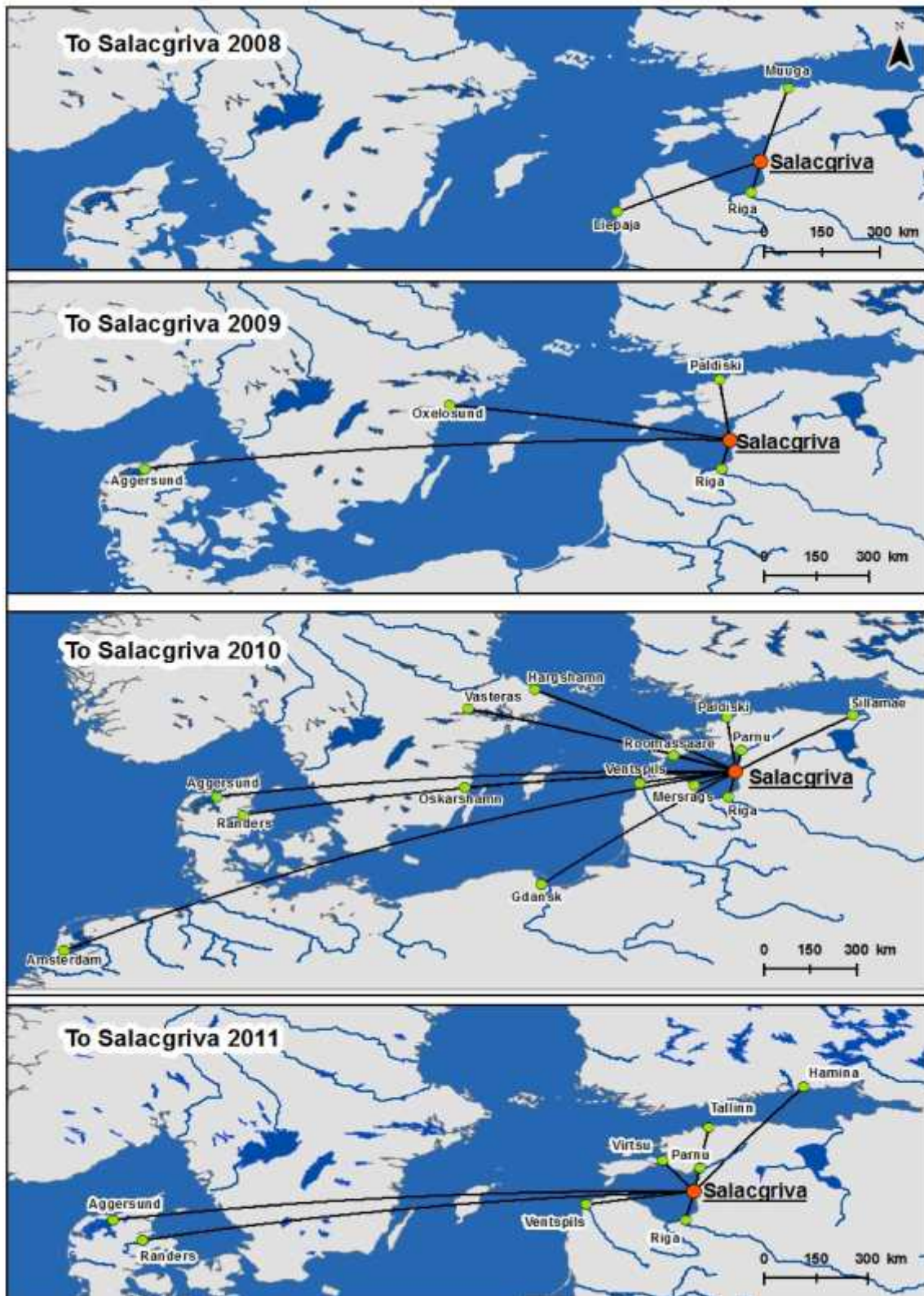


Appendix A 2 Annual cargo shipping destinations from Salacgriva port for years 2008 and 2009 (created by author)





Appendix A 4 Overview of annual cargo forwarders to Salacgriva port (2004-2007)
(created by author)



Appendix A 5 Overview of annual sources of cargos, received in Salacgriva port (2008-2011) (created by author)

