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## Significance of the European Fisheries fund in the development of fishery in Latvian ports

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### Abstract

Latvian ports are being developed as elements of a united transport logistics chain connecting the Baltic and other EU states, CIS states, Asia and America – they facilitate not only economic development of seaports and whole regions, but also the existence and development of fishery sector, wherewith the role of ports both in Latvia and in the EU continually increases. Technologically well-provided and developed ports is one of the basic principles of successful development of fishery sector, wherewith a great significance has an efficient use of the means allocated by the European Fisheries Fund.

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*Keywords:* cohesion policy; European Fisheries Fund; fisheries sector; Latvian ports.

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### 1. Introduction

After entering the European Union (hereinafter – the EU), likewise for the other member states, for Latvia became available the funding of the European Fisheries Fund (hereinafter – EFF) provided for the development fisheries.

In the Fisheries Sector Strategic Plan of Latvia for years 2007–2013 the fisheries' sector development was put forward an aim: opportunities of sustainable use of fish resources for the next generations and prosperity of the people involved in the fisheries (Ministry of Agriculture of the Republic of Latvia, 2006). To reach the aim put

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forward to the fisheries factor, there were determined several spheres and their sub-aims. One of the spheres is fisheries.

The aim, put forward to the fisheries' development, is – balanced and competitive fishing companies and Latvian fishing fleet (Ministry of Agriculture of the Republic of Latvia, 2006). To reach the aim several tasks were determined:

- 1) balancing fishing fleet capacity with the fish resources available to Latvia;
- 2) modernisation of the fishing fleet, increasing its economic vital capacity, but not raising the common capacity of fishing;
- 3) improvement of the ports' infrastructure to ensure the activity of fishing ships (Ministry of Agriculture of the Republic of Latvia, 2006).

The state's and the EFF funding and its optimal use for the development of fishery in the Latvian ports is one of the most significant aspects of the growth of the economy in Latvia. Deliberative and optimal use of the investments could facilitate not only the development of fishery, but also stabilized and strengthened importance of ports in the Latvian economy and regional development.

Research object – fishing development at the Latvian ports.

Research aim – to determine the influencing factors and the impact of the previous state's and the EFF investments on the fishing development at the Latvian ports, to find out the activities to be supported during the next planning period from 2014 – 2020 for a more efficient channelling of investments.

Research tasks:

- 1) to acquaint to the activity of the Latvian ports and fishing development at them;
- 2) to identify the influencing factors for the development of fishing at the Latvian ports;
- 3) to assess the influence of the state's and the EFF investments on the fishing at the Latvian ports;
- 4) to elaborate the activities to be supported during the next planning period.

Methods used within the research: descriptive, document and statistical analysis method.

## 2. Development of fishing sector for the Latvian ports

In Latvia there are 10 ports: three of them are the large ports (Riga, Ventspils and Liepaja) and 7 smaller ports (Skulte, Mersrags, Salacgriva, Pavilosta, Roja, Engure and Lielupe), located along the whole Latvian sea border (Ministry of Transport of the Republic of Latvia, 2008).

In the activity of Latvian ports there a gradual growth can be observed. During the period from 2004 until 2012 the turnover of cargos in Latvian ports increased by 32% (in average by 2 045 thousand tons a year) (Fig. 1). The largest turnover of cargos took place in the big Latvian ports (Freeport of Riga, Freeport of Ventspils, Liepaja port).

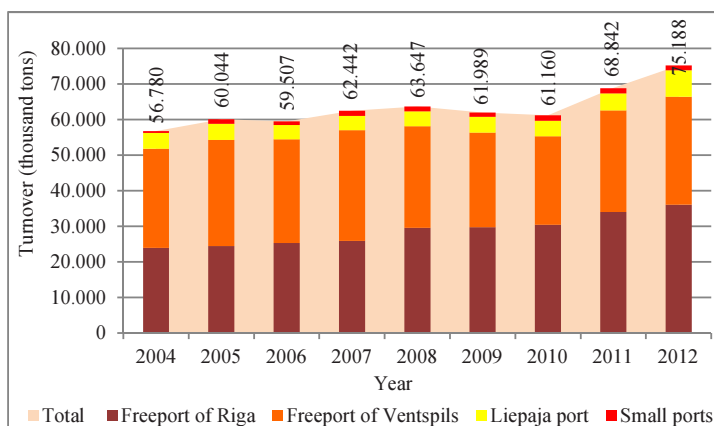


Fig. 1. The common turnover of cargos in Latvian ports from 2004–2012 (thousand tons)  
Source: made by the author according to Latvian ports, 2013

Through the ports of Latvia mostly are carried petroleum products (32%), coal and wood (accordingly: 31% and 6%) (Fig. 2). Much smaller turnover is formed by the transportation of woodchip, cargo containers, chemical bulk cargo, RO-RO cargo, ferrous metals and their ware, as well as transportation of crude oil (31%). The amount of the unloaded fish at Latvian ports constituted only 0.1% from the common turnover of cargos in 2012.

The large ports mostly are engaged in processing transit cargos, in their turn the small ports having local importance mostly are engaged in shipping timber and acceptance of fishing products; in summer season they also act as ports for yachts (Ministry of Transport of the Republic of Latvia, 2013).

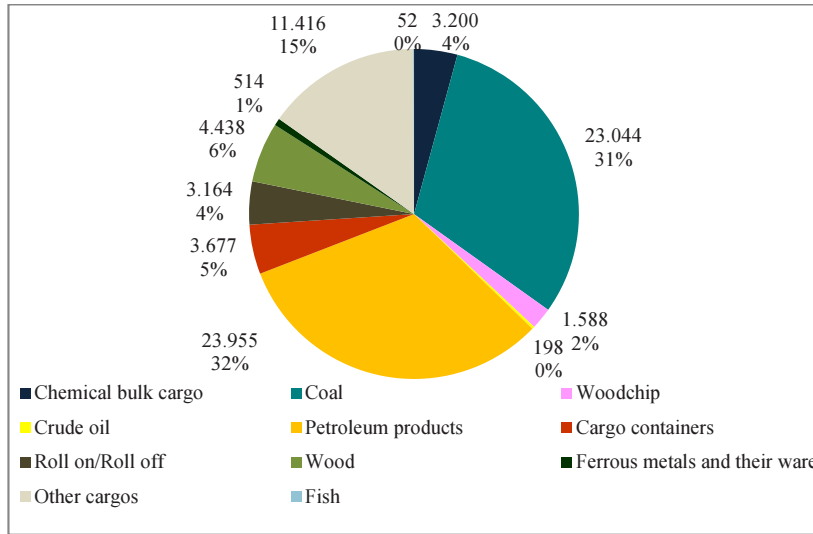


Fig. 2. Turnover of the cargos typical of the Latvian ports in 2012 (thousand tons, %). Source: made by the author according to Ministry of Transport of the Republic of Latvia and the Institute of Food Safety, Animal Health and Environment “BIOR”, 2013

All the ports in Latvia are used for the fishing needs, except Lielupe port, which is closed for cargo service.

Fishermen of Latvia catch fish in the inland-waters and waters of the EU member states, as well as in the international waters. The unloading of fish take place both in the area of Latvia and other countries by selling them to fish processing and trading enterprises, as well as to the inhabitants in local market.

Analysing the dynamics of the unloaded fish flow during the period from 2005–2012 it was established that the amount of the discharged fish decreased by –42% or –34.9 thousand tons (in average by –4.9 thousand tons a year) (Fig. 3).

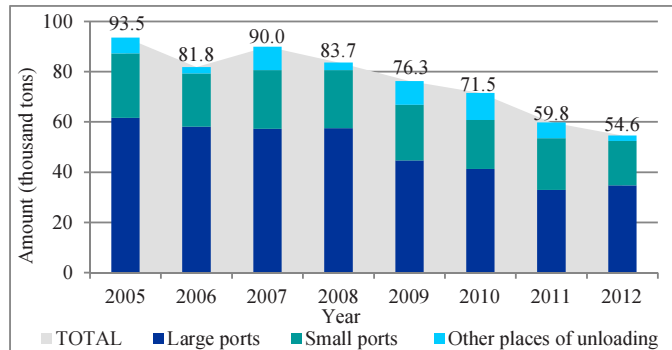


Fig. 3. The amount of the unloaded fish at Latvian ports and other unloading places from 2005–2012 (thousand tons) Source: made by the author according to the Institute of Food Safety, Animal Health and Environment “BIOR”, 2013

During this period the largest discharges of fish were made at the big Latvian ports: the amount of the discharged fish constituted specific weight 55–71% of the total amount of the unloaded fish. At the smallest Latvian ports the amount of specific weight of the discharged fish was 26–35%. In their turn the smallest unloading was established outside the areas of the Latvian ports: 3–15% of the total amount of unloaded fish.

The tendency of dramatic decrease in fish discharges is observed exactly at the big ports of Latvia (the amount of the unloaded fish went down by –43.5%) whereas at the small ports of Latvia the fish discharges have the tendency to decrease moderately (the amount of the unloaded fish went down by –31.1%).

The amounts of catches and unloaded fish at the Latvian ports of commercially important species depend on the quotas annually provided to Latvia (Fig. 4).

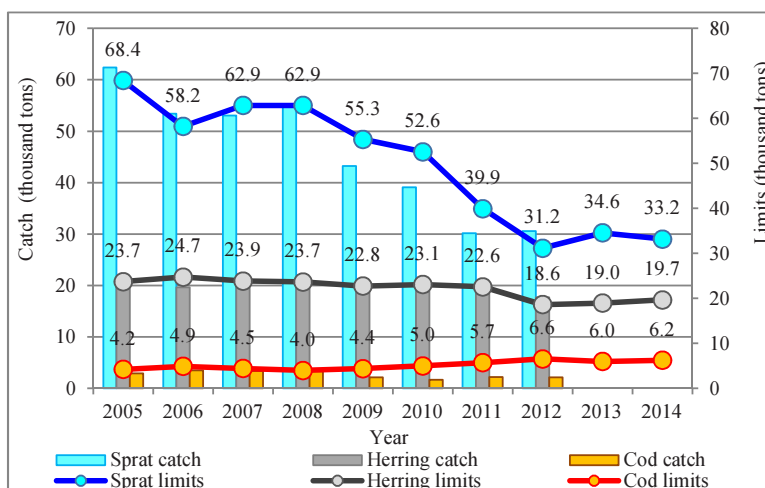


Fig. 4. The limits of fishing and amounts of catches from 2005–2014 (thousand tons)

Source: made by the author according to Ministry of Agriculture of the Republic of Latvia and the Institute of Food Safety, Animal Health and Environment “BIOR”, 2013

Available fishing opportunities vary from year to year and already several years a decrease of the common opportunities of fishing available to Latvia can be observed – from 96.4 thousand tons (in 2005) to 59.1 thousand tons (in 2014). The acquisition of the fishing quotas of the limited fish species varies depending on the fish species and fishing place. An exception is the acquisition of salmon quota (Table 1), what to a great extent is related to the ban of fishing using drifting nets, introduced in the EU in 2006, since the fishing using hooks is not efficient enough.

Table 1. The limits and amounts of catches of salmon from 2005–2014 (pieces, tons). Source: made by the author according to Ministry of Agriculture of the Republic of Latvia and the Institute of Food Safety, Animal Health and Environment “BIOR”, 2013

Salmon	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Limits (pieces)	59.5	59.5	56.5	48.0	40.8	38.7	33.0	16.2	14.3	14.0
Catch (tons)	2.0	8.3	11.2	–	–	0.003	–	–	–	–
Catch (pieces)	455.0	1 658.0	2 101.0	–	–	6.0	–	7.0	–	–

Within the last 8 years at the Latvian ports there have been significant changes in the structure of fish unloading amounts (Table 2). From 2005 until 2012 the specific weight of fish unloading reduced at the Freeport of Ventspils, (from 41.4% till 37.2%), at Pavilosta port (from 6.9% till 3.7%), Liepaja port (from 27% till 24.2%), Salacgriva port (from 4.4% till 1.5%) and Engure port (from 1.6% till 0.1%). On the contrary, the specific weight of unloaded fish has gradually increased at Skulte port (from 1.1% till 4.5%), at the Freeport of Riga (from 2.3% till 5%) and Mersrags port (from 4.2% till 6.4%). The specific weight of the unloaded fish has significantly increased at the Roja port (increase per 6 percent points), where it increased from 11.2% till 17.4%.

The most constant proportion varies at the level of 41.4% to 37.2% (coefficient of variation  $V\sigma = 7\%$ ) – at the Freeport of Ventspils. In 2005 at the port the specific weight of the unloaded fish constituted the fourth part of the total amount of the unloaded fish, whereas in 2012 – already the third part of the total amount of the unloaded fish, what indicates that the concentration of the unloaded fish at the Freeport of Ventspils has taken place already since 2005.

Basing on the data analysis conclusions can be drawn that the fish unloading amounts have a tendency to increase at the ports of Roja, Skulte, Riga and Mersrags. In their turn at the other ports the tendency is negative – the amounts of unloaded fish decrease. Only the Freeport of Ventspils has had the smallest fluctuations of unloaded fish, indicating the concentration of unloading at this port.

Table 2. Structure of unloaded fish amounts at Latvian ports from 2005–2012 (%). *Source:* made by the author according to the Institute of Food Safety, Animal Health and Environment „BIOR”, 2013)

Title of a port	2005	2006	2007	2008	2009	2010	2011	2012	Percent points	Coefficient of Variation - $V\sigma$	Rank		
											Place 2005th per year	Place 2012th per year	
Ventspils	41.4	43.3	40.3	44.7	41.8	43.8	36.5	37.2	-4	7	1	↔	1
Skulte	1.1	1.5	1.1	1.0	2.7	4.2	4.1	4.5	3	60	9	↕	6
Roja	11.2	10.9	12.4	14.1	15.0	13.2	20.8	17.4	6	24	3	↔	3
Pavilosta	6.9	5.2	5.4	5.4	4.9	4.8	4.7	3.7	-3	18	4	↕	7
Mersrags	4.2	3.7	4.1	4.9	7.1	7.7	6.2	6.4	2	28	6	↕	4
Riga	2.3	3.9	2.6	2.8	2.4	3.5	3.8	5.0	3	28	7	↕	5
Liepajas	27.0	26.1	28.1	23.8	22.6	20.6	21.2	24.2	-3	11	2	↔	2
Salacgriva	4.4	4.3	4.7	3.1	3.4	1.8	2.0	1.5	-3	40	5	↕	8
Engure	1.6	1.3	1.3	0.2	0.1	0.5	0.7	0.1	-2	82	8	↕	9
Large ports	71	73	71	71	67	68	61	66	-4	5	–	–	–
Small ports	29	27	29	29	33	32	39	34	4	12	–	–	–
Total	100	100	100	100	100	100	100	100	–	–	–	–	–

At the Freeport of Ventspils mostly are unloaded sprat (59%), at Liepaja port – codfish (84%) and salmon (56%), and the Roja port it is smelt (84%) and Baltic herring (39%). A big specific weight (64%) of the other fish species is unloaded at Liepaja port. The fish unloaded at the other ports constitute a minor specific weight (Table 3).

Viewing the data analysis we can conclude that the fish species concentrate at separate Latvian ports, what is influenced by the fishing place area, where the corresponding fish species live, and the distance till the closest port. Rapid changes of fish species' population and change of their settling places may dramatically influence the amounts of unloaded fish at the Latvian ports. Exactly the ports, having a big specific weight of some certain fish species unloading concentration, are subjected to a greater risk.

Table 3. Average specific weight of the unloaded fish species at the Latvian ports from 2005–2012 (%) *Source:* made by the author according to the Institute of Food Safety, Animal Health and Environment “BIOR”, 2013

Title of a port	Fish species name					
	Sprat	Salmon	Cod	Herring	Smelt	Other
Engure	0.2	–	–	2	0.2	–
Liepaja	29	56	84	3	–	64
Mersrags	1	–	–	16	11	0.1
Pavilosta	7	24	0.4	1	–	4
Riga	0.2	–	–	11	3	0.01
Roja	3	–	0.01	39	84	2
Salacgriva	1	–	–	10	1	0.0002
Skulte	0.3	–	–	8	1	–
Ventspils	59	20	16	9	0.1	30
Total	100	100	100	100	100	100

Fish unloading amounts at the Latvian ports are significantly influenced by the average market price of fish: if the fish price offered abroad is higher than it is in Latvia, fish are unloaded at the areas of foreign ports; as a result the amounts of unloaded fish at Latvian ports decrease. The biggest amounts of unloaded fish of late years (2009–2012) were in Nekso (Denmark), Vladislavovo (Poland) and Karlskrona (Sweden) (Fig. 5).

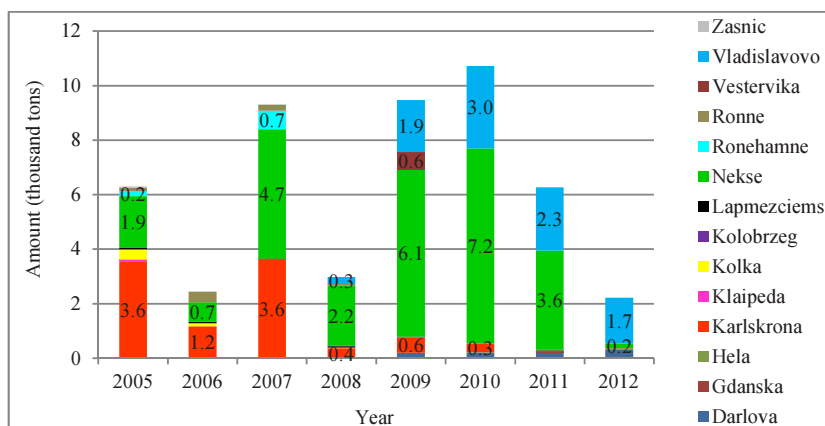


Fig. 5. Unloaded fish amounts outside the areas of the Latvian ports from 2005–2012 (thousand tons)

Source: made by the author according to the Institute of Food Safety, Animal Health and Environment “BIOR”, 2013

The amounts of unloaded fish at the Latvian ports are also influenced by the concentration of the fishing fleet: at the large Latvian ports land the fishing ships having a big carrying capacity and draught, while at the small Latvian ports – ships with comparatively smaller carrying capacity and draught. Since 2004, as a result of the measurements of fleet balancing (delivering fishing ships for cutting into pieces) the number of fishing ships in the fishing sector has decreased per 24%, what facilitated a freer access of fishing ships to the Latvian ports and balancing of the fishing fleet capacity with the available fish resources. Currently the fish fleet is only stabilising, maintaining its influence on the changes in the amounts of unloaded fish at the Latvian ports.

A significant impact on the amounts of unloaded fish at the Latvian ports have meteorological conditions. At the cold winter months (especially in January and February), when there is a low air temperature, the Riga Gulf has a tendency to freeze over; consequently the ports located along seacoast of the Riga Gulf are unavailable for fishermen. The only ports that do not freeze over at the low air temperatures are the ports of Ventspils and Liepaja, as well as Pavilosta port, located along the Baltic Sea. Thus, in cold winters and in cases when the greatest part of Latvian ports freezes over, the Ventspils port and Liepaja port (much less Pavilosta port) are used to unload fish, as a result of what the amount of the unloaded fish at the areas of these ports increases, while it decreases at the areas of the other ports. Fish are also unloaded abroad as long as a high average market price is offered for fish.

In the framework of the activity No. 303 “Investments in Fishing Ports and Places of Fish Unloading” of the 3<sup>rd</sup> prior area (axis) “Measures of Common Interest” of the operational program “For Implementation of the European Fisheries Fund Support in Latvia for 2007–2013” Latvian ports were given an opportunity to receive the funding of the state and the EFF aimed at improvement of infrastructure necessary for fishing products unloading and storing, as well as ensuring high quality port services for fishermen. In the framework of the activity the EFF funding in amount of LVL 13.94 million was allocated to 8 Latvian ports (the support was not received by the ports of Engure and Lielupe). The Freeport of Riga was not included in the calculations; it has two common projects together with the port of Roja at the value of LVL 0.96 million.

Analysis of ranks’ correlation gives proof that between the amount of the discharged fish at the Latvian large and small ports and the made investments there is a close correlation (–1.0000). It means that the large Latvian ports where the biggest fish discharges were made, have received the least state and EFF funding (LVL 3.32 million). Whereas the small Latvian ports, where the smallest fish discharges were made, received the biggest state and EFF funding (LVL 7.54 million). The data analysis allows concluding that the invested means were focused on the development of fishery in Latvian small ports despite the amounts of unloaded fish at the ports were the least (Fig. 6).

Between the amount of the discharged fish at every Latvian port and the made investments there is no close correlation (0.2714), indicating that the investments into the Latvian ports were made irrespective of the amount of the unloaded fish.

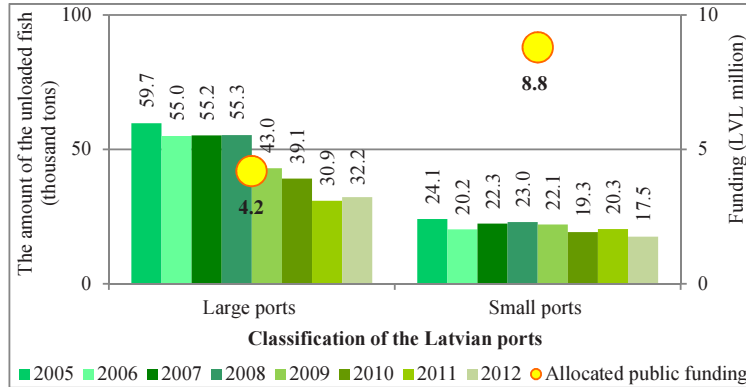


Fig. 6. The amount of the unloaded fish at the Latvian ports from 2005–2012 and the public funding allocated to the ports (thousand tons, LVL million). Source: made by the author according to the Institute of Food Safety, Animal Health and Environment “BIOR” and Rural Support Service, 2013

To determine how efficiently the funding allocated by the state and EFF for the large and small Latvian ports was used, the influence of the invested means on the amount of the unloaded fish was analysed.

Taking into account implementation period of the greatest part of projects under activity No.303 “Investments in Fishing Ports and Places of Fish Unloading” the time chosen for the comparison was 2010–2012; and 5 ports of Latvia were compared where the projects were implemented until year 2011 including. Consequently the acquired results showed that in the group of small Latvian ports which had received the support by the state and EFF, the amount of the unloaded fish within the last 2 years decreased in average by –7.9%, but at the large Latvian ports: by –26.6% (Fig. 7).

Whereas at the small ports which had not received the support the amount of the unloaded fish dramatically decreased by –73.2%.

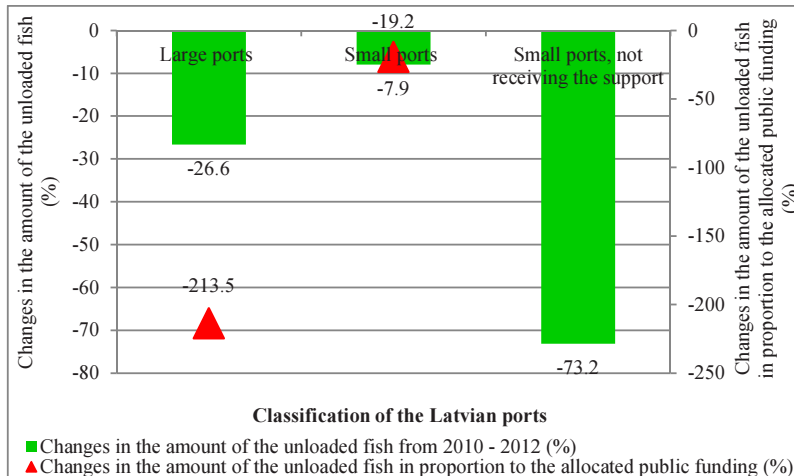


Fig. 7. Influence of the investments under the activity No. 303 “Investments in Fishing Ports and Places of Fish Unloading” on the amount of the fish unloaded by the Latvian ports from 2010–2012 (%). Source: made by the author according to the Institute of Food Safety, Animal Health and Environment „BIOR” and Rural Support Service, 2013)

For more precise assessment of the support return was used a complex indicator – ratio of the decrease in the amount of the unloaded fish and the received the state and EFF funding, namely – to how great extent during these last 2 years the amount of the unloaded fish at the Latvian ports has gone down in proportion to the received support.

The differences in the indicator between the large and the small ports are much bigger: decrease in the amount of the unloaded fish at the small Latvian ports in proportion to the received the EFF funding is –19.2%, but at the large Latvian ports –213.5%. Relatively smaller decrease in the amount of the unloaded fish at small ports in proportion to the received funding can be explained by the fact that the invested means are comparatively big in proportion to the amount of the unloaded fish.

The analysis of data allows to draw conclusions that the made investments have had a positive influence on discharges of fish at the Latvian ports: at the ports which received the state and EFF funding, the amount of the unloaded fish decreased obviously less (in total by –34.5%) than at the ports which did not receive the support (the amount of the unloaded fish went down by –73.2%, what is twice more than at the ports which received the support).

In general we can conclude that the amounts of unloaded fish at the Latvian ports are influenced by a number of changeable factors: population of fish species and a quota correspondingly provided by the EU, location of a port, average fish purchase price, fishing fleet concentration, meteorological conditions and the infrastructure and services available at ports, as a result it is difficult to predict further development of fishing at the Latvian ports. Wherewith aimed at the state's and the EFF funding efficient channelling:

- investments should be concentrated, choosing projects depending on the project quality and significance, but not on the size or a stage of port's development: when allocating funding a priority should be given to the projects involving a bigger number of fishing companies with the biggest common limit of catches, and involving the fishermen with a diversified fishing approach (those who are engaged both in the sea and coastal fishing);
- support should be provided also for the fishing development at the small Latvian ports, since these ports have a significant role in the development of regions and in the neighbourhood of the ports there is an opportunity to catch such fish species which it is not possible to catch in the surroundings of the large ports, what would allow broadening the assortment of catches, minimising the expenses of fishermen and consequently – facilitate the productivity of fishing and stabilize the economic position of the sector.

The developed suggestions would ensure the efficient use of the investments for the development of fishing at the Latvian ports.

### **3. Conclusions and proposals**

In Latvia there are 10 ports: three of them are the large ports (Riga, Ventspils and Liepaja) and 7 smaller ports (Skulte, Mersrags, Salacgriva, Pavilosta, Roja, Engure and Lielupe). All the ports in Latvia are used for the fishing needs, except Lielupe port, which is closed for cargo service. The large ports are mostly engaged in the processing of the transit cargos, whereas the small ports having local importance – mostly are engaged in shipping timber and acceptance of fishing products; in summer season they also act as ports for yachts.

The fish caught in the Baltic Sea and the Riga Gulf is unloaded at the areas of the Latvian ports and outside the ports' areas, as well as at the areas of foreign countries. The amount of the unloaded fish from 2005–2012 decreased per –42%. Within the last 8 years the biggest amounts of unloaded fish have been at the large Latvian ports (55–71%), whereas the smallest – outside the areas of the Latvian ports (3–15%). At the small Latvian ports were unloaded 26–35% of fish. The most important for the fishing development are the ports of Ventspils, Liepaja and Roja. A great significance started gaining also the ports of Skulte, Riga and Mersrags, where at the ports' areas during the last 8 years the amount of the unloaded fish increased considerably.

The amounts of unloaded fish at the Latvian ports are influenced by a number of changeable factors: population of fish species and a quota correspondingly provided by the EU, location of a port, average fish purchase price, fishing fleet concentration, meteorological conditions and the infrastructure and services available at ports, as a result it is difficult to predict further development of fishing at the Latvian ports. Consequently a priority in



allocating the state's and the EFF funding should be given to the projects involving a bigger number of fishing companies with a bigger common catch limit, and involving the fishermen with the diversified fishing approach. Support should be provided also for the fishing development at the small Latvian ports, since these ports have a significant role in the development of regions and in the neighbourhood of the ports there is an opportunity to catch such fish species which it is not possible to catch in the surroundings of the large ports, what would allow broadening the assortment of catches, minimising the expenses of fishermen and consequently – facilitate the productivity of fishing and stabilize the economic position of the sector.

Continuing to provide the state and EFF funding for the development of fishery would not only promote the development of sector and rise of competitiveness in it, but also stabilize and strengthen the importance of ports in the economy of Latvia and regional development.

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