Zemkopības ministrija

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Rīga

25.05.2022 Nr. 4.1-4e/866/2022

Uz Nr.

Ms Valerie Tankink
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Joseph II 99
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Temats: 2021.gada ziņojums par Latvijas zvejas floti

Saskaņā ar Eiropas Parlamenta un Padomes regulas (ES) Nr. 1380/2013 (2013. gada 11. decembris) par kopējo zivsaimniecības politiku 22.pantu, vēlamies iesniegt attiecīgā 2021.gada ziņojumu par Latvijas zvejas floti.
Iepriekšminētais ziņojums jau ir nosūtīts uz e-pasta adresēm: Valerie.TANKINK@ec.europa.eu, eoin.mac-aoidh@ec.europa.eu, MARE-D3@ec.europa.eu.

Lūdzu skatīt pievienoto "The Annual Report on the Latvian Fishing Fleet 2021" un tā sešus pielikumus uz 24 lapām.

Ar cieņu

Valsts sekretārs
Raivis Kronbergs

Unofficial translation

Ms Valerie Tankink
DG MARE/D3
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Subject: The Annual report on the Latvian Fishing Fleet 2021

In accordance with Article 22 of the Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, hereby we would like to submit the relevant Annual Report on the Latvian Fishing Fleet 2021.

The Report mentioned above already has been sent to the following e-mail addresses: Valerie.TANKINK@ec.europa.eu, eoin.mac-aoidh@ec.europa.eu, MARE-D3@ec.europa.eu.

Please see attached the Annual Report on the Latvian Fishing Fleet 2021 with its six Annexes on 24 pages.

Sincerely yours,

State Secretary
Raivis Kronbergs

Pielikums
Zemkopības ministrijas
Datums skatāms laika zīmogā
vēstulei Nr. 4.1-4e/866/2022

The Annual Report on the Latvian Fishing Fleet 2021

1. Summary of the report

This report is elaborated according to *Guidelines for the analysis of the balance between fishing capacity and fishing opportunities according to Art 22 of Regulation (EU) No 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy.*

Since 2004, Latvia has fulfilled the existing rules and requirements of vessel entry/exit regime without any deviations.

The fishing vessel decommissioning process affects positively the balance between the fishing fleet's capacity and the fish resources allocated to Latvia.

The Technical indicators show how much fleet capacity could be reduced without reducing overall fleet output (landings). The Technical indicators can therefore be considered as the baseline indicator for each fleet segment (*COM 2014, 545*).

Inactive Fleet Indicator (IFI) shows that for Latvian offshore fleet segment VL1218 the proportion of inactive vessels does not exceed allowable level for the period of last 13 years. However, for segment VL2440 in the last three years increasing in number of inactive vessels is observed by almost 20% in total. It is especially relevant to cod fishing vessels which temporary cased their activities as from spring 2019 and followed with total stop in the next years. In 2021 the support measure for the permanent cessation of cod fishing activities were opened in Latvia under the conditions stated in the Regulation (EU) No 2020/1781 amending Regulation (EU) 2016/1139 as regards fishing capacity reduction in the Baltic Sea, and Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund as regards permanent cessation of fishing activities for fleets fishing for Eastern Baltic cod, Western Baltic cod and Western Baltic herring. This fleet reduction was carried out in accordance with the Action plan which is a part of the Latvian Annual Fleet report, 2019. The results and impact of the fleet reduction will be analyzed in the next years.

Vessel Utilization Indicator (VUI) for segment VL0010 shows slight decrease in last two years and reached 0.21 in 2021, i.e., not "in balance". It could be explained by low activity level in the segment of small boats and seasonality. In recent years, low activity has also been linked to the high interaction periods and damage caused by seals to coastal fishing gears and catches. During the period when seals are observed in a larger amount, fishermen do not deploy their fishing gears to avoid the destructions and damages to their property. VUI for segment VL1218 decreased in comparison to the previous year and reached 0.93 in 2021 and therefore this segment can be considered as "in balance". VUI for segment VL2440 slightly decreased in comparison to the previous year and reached 0.66 in 2021 just below the threshold 0.7. It could be stated that capacity of this segment is not "in balance" with the fishing opportunities. This imbalance could be further evaluated in the next years, when the cod fishery permanent cessation measure and reduction of segment VL2440 will be finished and new data will be available.

Following the recommendations and applying the interpretation proposed in the Guidelines (*COM 2014, 545*) about the Biological Indicator - Sustainable Harvest Indicator (SHI) it can be concluded:

- for cluster of two segments (trawlers VL1218 and trawlers VL2440) that generally rely on Gulf of Riga herring with small bycatch of sprat, average SHI value is equal to 0.77. Despite the relatively high SHI separate value for sprat, it could be stated that the cluster as a whole "is in balance between fleet capacity and the possibility of fish resources" with a possibility to increase landings;
- for segment of trawlers VL2440 which mainly exploits the sprat stock and herring stock as a bycatch in the Baltic proper (SD 25-32) SHI values for both species are higher than the critical value of "1", i.e., the segment "is not in balance". This imbalance could be further evaluated in the next years, when the cod fishery permanent cessation measure and reduction of segment VL2440 will be finished and new data will be available.

According to methodology proposed in guidelines *(COM 2014, 545)* biological indicator SHI for segment VL0010 was not calculated due to unavailability of quantified parameters and scientific advice for the stocks included in catch composition in fishery with passive gears.

For the evaluation of the achievement of balance between fleet capacity and fishing opportunities in Latvian fishery from 2016 to 2020 three Baltic Sea fleet segments were selected and included in the analysis. Two economic indicators were calculated for each fleet segment to evaluate whether fleet segments are economically sustainable in the long-term and short-term.

The indicator Return on Investment (ROI) shows investment profitability. ROI positive and greater than the low-risk long-term interest rate shows positive return generated by the investment and suggests that extraordinary profits are being generated as a sign of economic under-capitalization. During the analyzed period 2016-2020 the ROI ratio greater than 1 for the fleet segment LV2440 indicates that the economic activity of the segment is cost-effective in the long- term. The negative ROI was shown for the coastal vessels attributed to the segment VL0010 and for the segment VL1218 in 2017 and 2019. The changes were occurred due to the sharp increase in total operating costs for both segments in 2017 and decrease in the volume and value of landing in 2019 for the segment VL0010 what was caused by a decline of average fish price in 2019. All tree analyzed segments has a high positive ROI in 2020 characterizing the profitable fishery in the long-term. The detailed ROI calculations for each fleet segment and conclusions are presented in the section 7.3.1 and Annex IV.

The second economic indicator Ratio of Current revenue to Break-even revenue (CR/BER) reflects the financial capability of businesses in each fleet segment to continue vessel operations on a day-by-day basis. The trawlers segment VL2440 operating in the Baltic Sea offshore zone show CR/BER ratio positive and greater than 1 from 2018 to 2020, characterizing the segment profitability in the short-term. The CR/BER ratio results for 2019 for the coastal segment VL0010 and for the segment VL1218 trawlers operating in the Gulf of Riga show CR/BER ratio close to zero or -0.24 and -0.04 respectively, indicating that there the insufficient income is generated to cover variable, fixed and capital costs signify the potential over-capitalization which characterizes the payback of the fishery but not generation of the profit. The CR/BER indicator fluctuates from year to year for all three segments and show stable profitable fishery in 2020. The detailed calculations and conclusions are presented in the section 7.3.2 and Annex V.

In this report the following categories of fishing vessels were excluded from the analysis of respective indicators:

- vessels over 40 meters operating in the Atlantic (area 27 and 34) due to the limited number of vessels and respective data confidentiality;
- part of coastal vessels listed in the fishing fleet register not engaged in commercial fishing and involved only in fishing for self-consumption.

2. Statement of MS opinion on balance of fleet capacity and fishing opportunity

Latvia continues to apply strictly and fully complies with the existing rules of Common Fisheries Policy for the Community Fishing Fleet entry/exit scheme. The Fisheries Department (FD) of the Ministry of Agriculture requires withdrawal of the fishing vessel or vessels with equivalent or bigger capacity from the fishing fleet without public support before the entry of the new fishing vessel or vessels into register. After 1st of May, 2004 there were 390 fishing vessels decommissioned and withdrawn from the Baltic Sea fleet in total. This process positively affects the balance between the fishing fleet's capacity and the fish resources allocated to Latvia. In the next period all indicators which show the signs of imbalance will be thoroughly evaluated and appropriate recommendations will be provided.

3. Section A

3.1. Description of the fleets

General Description of the Latvian Fishing Fleet

The Latvian fishing fleet is historically divided into three major groups: High Sea vessels, Baltic Sea (including the Gulf of Riga) offshore vessels and coastal fishing vessels. All fishing vessels flying Latvian flag are registered in ten Latvian ports.

Table 1. The Latvian Fleet Segmentation for the 2021

Fleet segment	% from total No of vessels	% from total GT	% from total kW
High Seas	1.1	75.0	54.3
Baltic Sea offshore	6.2	21.5	33.8
Baltic Sea coastal	92.7	3.5	11.9

On 31st of December, 2020 the Latvian fishing fleet contained 660 vessels with total fleet engine power 41410 kW and overall gross tonnage 23545 GT, but on the 31st of December, 2021 the Latvian fishing fleet contained 645vessels with total fleet engine power 38034 kW and overall gross tonnage 21792 GT (Table 3).

3.2. Link with fisheries

High Sea Fleet

The segment is represented by 7 big vessels over 40 meters. These vessels contribute only 1.1% to the total vessel number but cover 75% of the total GT and 54.3% of the total KW respectively.

In 2021 vessels of this segment performed their fishing activities in the waters governed by the North East Atlantic Fisheries Commission (NEAFC) and the Fishery Committee for the Eastern Central Atlantic (CECAF).

Main fishing gears for these vessels were midwater and bottom otter trawls and shrimp trawls.

Target species in the NEAFC area was northern shrimp and Atlantic cod and in the CECAF area – mackerel, horse mackerel, sardine, silver hake, Atlantic bonito, Atlantic pomfret. This fleet segment constitutes about 40% of the total Latvian catch in 2021.

Baltic Sea (including the Gulf of Riga) Offshore Fleet

This fleet group consisted of 40 fishing vessels (on the 31st of December, 2021) with overall length from 12 to 40 m LOA (Length overall). Number of vessels in this segment was 6.2% of the total Latvian fishing fleet and it contributed 21.5 % to total GT and 33.8% to total kW.

Vessels of this group operate only in the Baltic Sea (including the Gulf of Riga) offshore waters in the International Council for the Exploration of the Sea (ICES) subdivisions (SD) 22 – 32.

The main fishing gears for these vessels are midwater and bottom otter trawls targeting for sprat, herring and in the past (until 2019) also cod. This fleet segment constitutes about 56.8% of the total Latvian catch in 2021.

Table 2. Description and segmentation of the Baltic Sea (including the Gulf of Riga) offshore fleet in 2021

Length	Type of gear	Number of vessels			Total fleet catch in 2021 (%) of catch quota		
		31.12.2020	Active in 2021	31.12.2021	Cod	Sprat	Herring
VL1218	Trawler	9	9	9	0	2.2	32.2
VL2440	Trawler	40	28	31	100	97.8	67.8

Coastal Fishing Fleet

Represented by 598 fishing boats with overall length equal to or less than 12 m which constitute the majority of vessel number or 92.7% from the total, but contribute only 3.5% to total GT and 11.9% to total kW.

In 2021, the coastal fishers used actively and regularly 192 boats for the commercial fishing and 44 boats - for self-consumption fishing. Some boats (13) have been used in both fisheries. Other fishing boats fished episodically or were used as accessory boats.

Coastal fleet segment is very important for Latvian coastal regions along the Gulf of Riga and sea coastline for socio-economic reasons. Small-scale fishery is the main source of subsistence and employment for residents of remote coastal communities.

However, the catches of coastal fishing fleet are relatively small (about 5.3% of the total Baltic Sea catches) and these include Baltic herring, cod, round goby, flounder, smelt, as well as garfish, perch, vimba, bream and other non-TAC and non-quota species mainly obtained by fixed passive fishing gears. This fleet segment contributed about 3.2% to the total Latvian catch (including High Sea fishery) in 2021.

In 2021 coastal fishing fleet also includes 44 boats (from 598) used for self-consumption fishing within one gear rule (maximum 1 net or 1 herring net or 1 fyke-net or 100 hooks could be used simultaneously by one person) and the marketing of these catches is prohibited.

However, in the coastal fishing fleet the scrapping plan was fulfilled in relation to GT and kW but was not fully achieved in relation to the number of vessels. Since in the coastal fishery only passive gears are deployed, the balancing of the number of the vessels is more important than GT and kW.

3.3. Development in the fleets

In 2021 decrease in GT and kW as well as in number of vessels of Latvian fishing fleet is observed, which is connected to the implementation of Action plan (part of Fleet Report 2019) of reduction cod fishing fleet segment VL2440 (Table 3).

Table 3. Evolution of Latvian fishing fleet (from 1st of May, 2004 to 31st of December, 2021)

Date	Number of vessels	GT	kW
Census: 1st of May, 2004	898	44449	74320
31st December, 2020	660	23545	41410
31st December, 2021	645	21792	38034
Difference between CEN date and 31st of December, 2021	253	22657	36286

4. Section B Statement of compliance with entry/exit scheme and with level of reference

In 2021 Latvia fully respected capacity limitations in terms of GT and kW according to the *Commission Regulations 1438/2003* and *916/2004*. National legislation prescribes that all new intentions for entries – purchase or construction of any fishing vessel shall be agreed before with the relevant authorities (the Fisheries Department (FD) of the Ministry of Agriculture).

Table 4. Management of entry/exit regime on 31.12.2021

		GT		kW	
1	Capacity of fleet on 1st May 2004	**GTFR**	44449	**kWFR**	74320
2	Capacity level for the application of entry/exit regime	**GT04**	56555	**kW04**	83930
3	Entries of vessels of more than 100 GT financed with public aid	**GT100**	0	**kW100**	0
4	Other entries or capacity increases (not included in 3 & 5)		60987		78325
5	Increases in tonnage GT for reasons of safety	**GTS**	0	-	-
6	**Total entries (3+ 4 + 5)**		**60987**		**78325**
7	Exits before 1/1/2007 financed with public aid	**GTa1**	3134	**kWa1**	7441
8	Exits after 1/1/2007 financed with public aid	**GTa2**	9145	**kWa2**	22487
9	Other exits (not included in 7 & 8)		71365		84683
10	**Total exits (7 + 8 +9)**		**83644**		**114611**
11	Power of engines replaced with public aid conditional to power reduction	-	-	**kWr**	0
12	Capacity of the fleet on 31.12.2021 (1 + 6 – 10)	**GTt**	21792	**kWt**	38034
13	Fleet ceiling on 31.12.2021		44689		54002

Line 4 is calculated as: 4 = (12 – 1) + 10 – (3 + 5)
Line 13: Ceiling GT = 2 – 35% 3 – 98.5% 7 – 96% 8 and kW = 2 – 35% 3 – 7 – 8 – 20%11 %11

5. Section C

5.1. Information on general level of compliance with the fleet policy

In 2021, as before, the main organizations responsible for the management of the national fleet were:

- The Fisheries Department (FD) of the Ministry of Agriculture with responsibilities:

- Elaboration of the national Fisheries Policy and functioning of the Latvian Fisheries Integrated Control and Information System (LFICIS);
- Supervision of implementation of the national fisheries management measures, including national fishing fleet ceiling levels and the fishing fleet capacity adjustment plans;
- Implementation of the fisheries policy in Latvia (issuing special fishing permits for fishing vessels according to the EU requirements, authorization for entry/exit of the fishing vessels into the Fishing Fleet Register etc.);
- General management of fishing licenses and fishing authorization for offshore fishing vessels.

- The State Environmental Service (SES) of the Ministry of Environment and Regional Development is responsible for control and enforcement of the fishing activities and vessel monitoring system (VMS) reporting;
- The Latvian Ship Register (LSR) of the Maritime Administration of the Ministry of Transport is responsible for registration of the vessels (also the fishing vessels) into the common ship register;
- The Rural Support Service (RSS) under the supervision of the Ministry of Agriculture is responsible for management of projects implementation with respective national and EU public support from the European Maritime and Fisheries Fund.

5.2. Summary of strengths and weaknesses of the fleet management system

Strengths of the fleet management system:

- Development of the LFICIS provided close collaboration between above mentioned Latvian fishing fleet management institutions;
- The Institute of Food Safety, Animal Health and Environment "BIOR" has to provide and obtain precise information about stock conditions and fleet fishing effort in the Baltic Sea and the Gulf of Riga;
- Functioning of the fishing fleet register is supervised by FD that provides complete and precise data on all concerned vessels;
- Good and practically functioning vessel entry/exit management scheme is established in Latvia.

Weaknesses of the fleet management system:

- Information entered in LFICIS was accessible for changes to correct the previously entered data; however, on the other hand for justified reasons under proper management by competent authorities the data normally could be slightly changed within the time to adjust with real status.

5.3. Plan for improvements in fleet management system

In 2021 still some improvements were done in the LFICIS to comply with all the requirements set by the EU Fisheries control regulation. This ensured not only improvement of the fisheries data quality by the crosschecks and data validation but also facilitates the work efficiency of the personnel working with LFICIS.

At this stage massive work is done to develop and put in place the new UN/FLUX standard for the snapshot reporting in Latvia. It is main priority to deliver UN/FLUX standard reporting as soon as possible in order to comply with the EU requirements.

6. Section D

Information on changes of the administrative procedures relevant to fleet management

There were no significant changes in 2021 in the administrative procedures. However, it should be mentioned that the work with LFICIS improvements and development is still continuing. For the years 2012-2021, the Fisheries Department (FD) invested quite a lot in development of LFICIS to improve reliability of the data, to make easier its processing and routine work, to improve the forming of the required reports.

7. Section E

Estimation and discussion of balance indicators

7.1. Technical indicators – Vessel Use Indicators

Technical indicators for Latvian fishing fleet were calculated according to the 2014 Balance Indicator Guidelines (*COM 2014, 545*). These indicators show how much fleet capacity could be reduced without reducing overall fleet output (landings). The technical indicators can be considered as the baseline indicator for each fleet segment. The maximum day at sea was calculated as follows: the average number of days at sea of the top 10 most active vessels in the fleet segment in a given year.

The following categories of fishing vessels were excluded from the analysis:

- vessels over 40 meters operating in the Atlantic (ICES area 27 and 34) due to the limited number of vessels and data confidentiality;
- coastal vessels listed in the Fleet Register not engaged in commercial fishing and involved only in fishing for self-consumption.

7.1.1. The Inactive Fleet Indicator – IFI

The proportion of inactive vessels of the total fleet was calculated with respect to number of vessels, GT and kW. The total number of vessels registered in the fleet register on the 31st of December of the respective year and all active vessels of the corresponding year were taken to determine the number of inactive vessels by different length classes. The values of Inactive Fleet Indicator for period 2009-2021 are presented in Annex I.

The IFI indicator for the segment VL1218 shows zeros in last five years, as there were no inactive vessels in this segment. For the segment VL2440 the IFI indicator is increased in last three years by almost 20% in total. This increasing could be explained by negative effect of the reduction of sprat and herring quota in the last years and by implementation of complete ban for cod targeted fishery in the Eastern part of the Baltic Sea. The proportion of inactive vessels in the segment VL2440 exceed threshold value (10%) and according to the 2014 Balance Indicator Guidelines this segment is not in balance with respect to IFI. The measures to balance the fleet segment VL2440 were included into Annex VII of The Annual Report on the Latvian Fishing Fleet 2019. The results of fleet reduction will be analyzed in the next years.

7.1.2. The Vessel Utilisation Indicator – VUI

Vessel Utilisation Indicator characterizes the ratio between efforts actually deployed to the maximum effort that could be extended by the fleet. All active Baltic Sea vessels, which had license and fished at least one day a year have been taken for the calculation. The values of Vessel Utilisation Indicator also known as Vessel Utilisation Ratio (VUR) are presented in Annex II.

The segment of trawlers VL1218 operates mainly in the Gulf of Riga with target species Baltic herring. Number of vessels in 2021 is reduced by 72% in comparison to 2006. Taking into account that VUI value of last five years is greater than 0.9, it could be stated that capacity of this segment is in balance with the fishing opportunities.

The segment of trawlers and netters VL1824 does not exist since 2017. According to the rules of clustering (*Regulation (EU) 2016/679*) the remaining vessel was included in the segment of trawlers VL1218.

The segment of trawlers VL2440 operates mainly in ICES SD 25-32 with target species Baltic sprat and bycatch of Baltic herring and in the past (until 2019) targeting Baltic cod as well. The quotas for these stocks were reduced for several years with total closure of the Eastern Baltic cod targeted fishery from the second half of 2019. Number of vessels in 2021 is reduced by 61% in comparison with 2006. VUI for this segment in the last three years was around 0.66 just below the threshold 0.7. It could be stated that capacity of this segment is not "in balance" with the fishing opportunities. This imbalance could be evaluated in the next years, when reduction of cod fishing segment VL2440 will be finished and new data will be available.

The segment of small-scale coastal fishery VL0010 was calculated only for commercial fishery. The coastal fishery uses different static gears such as nets, traps, lines and seines. Average activity level for this segment was less than 25% of the potential during the period of 2009-2021. In general, it indicates that for significant part of coastal fishers the fishery constitutes only a part job in their activities. This could be also connected with the lower availability of fish resources and its' seasonality in the coastal area. Although the utilization ratio of small boats VL0010 is consistently at a very low level, this segment is very important in socio-cultural aspect as traditional activities for population of coastal settlements.

Summary

In the segments where the number of vessels is around 10 or less, any changes in fishing strategy by one vessel or one company could noticeably vary the technical indicator values. For Latvian fishing fleet the segment of trawlers VL1218 can be considered as small in number of vessels and any conclusion of it balance should be treated with caution and verified over the time.

In 2021 the value of the vessel utilization rate for the segment VL1218 is greater than 0.9 and it could be stated that capacity of this segment is in balance with the fishing opportunities. VUI value for segment VL2440 is just below the threshold 0.7 and it could be stated that capacity of this segment is not "in balance" with the fishing opportunity. The imbalance of fleet segment VL2440 could be evaluated in the next years, when reduction of this segment will be finished and new data will be available.

VUI value for segment VL0010 is on the low level as in previous years and it could be explained by low activity level and seasonality. Further closer look on this segment development in relation to available fish resources should be done in the following years.

7.2. Biological indicators

7.2.1. Biological indicator Sustainable Harvest Indicator – SHI

The Sustainable Harvest Indicator (SHI) was defined for two Latvian fishing fleet segments, which contribute around 89% to the total Latvian catch in the Baltic Sea. The values of SHI for period of 2008-2020 and two fishing regions (Baltic proper and Gulf of Riga) were calculated for the following fleet segments:

- trawlers VL2440 in SD 25-32 (excl. SD 28.1) with target species of sprat (82% of the mixed catches);
- trawlers VL1218 in the Gulf of Riga (SD 28.1) with target species of herring (91% of the mixed catches);
- trawlers VL2440 in the Gulf of Riga (SD 28.1) with target species of herring (91% of the mixed catches).

The values of Current fishing mortality (Fc) and fishing mortality of Maximum Sustainable Yield (Fmsy) for stocks exploited by Latvian fishing fleet were obtained from the Report of Baltic Fisheries Assessment Working Group (*ICES. 2021. Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. 3:53. 717 pp. https://doi.org/10.17895/ices.pub.8187*):

- Sprat in SD 22-32 – Fc=0.37, Fmsy=0.37 (average for the range 0.31-0.41);
- Herring in SD 25-27, 28.2, 29 and 32 – Fc=0.46, Fmsy=0.21;
- Herring in SD 28.1 (Gulf of Riga herring) – Fc=0.24, Fmsy=0.32;
- There are no data for the SHI calculation for the Baltic cod stock.

The calculated SHI indicator values for all species and fleet segments are presented in the Annex III.

For segment trawlers VL2440 in SD 25-32 (excl. 28.1) SHI values for both herring and sprat stocks were calculated separately and average value of SHI for the segment was determined (Fig.1, Annex III). The average SHI values for this segment are quite widely fluctuating around "1" in 2008-2020, and mainly depend on the ratio Fc/Fmsy values for the sprat, which is the largest part of the total catches (around 82%). Catches of herring in this segment should be considered as a permanent bycatch in sprat fishery.

The separate SHI indicator for herring stock SD 25-32 (excl. 28.1) in 2020 was significantly higher than in 2019 (2.19 in contrast to 1,61) and therefore VL2440 segment should be formally considered as "not in balance" in relation to herring. The imbalance of fleet segment VL2440 could be evaluated in the next years, when reduction of this segment will be finished and new data will be available.

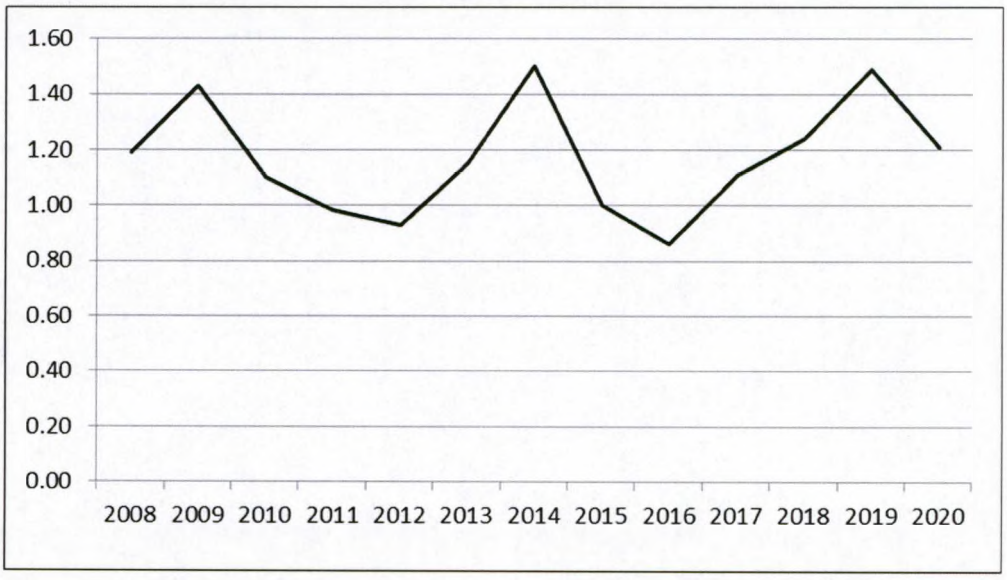

Fig. 1. The changes of biological indicator SHI during the period of 2008-2020 for the segment of trawlers VL2440 in the Baltic Sea.

For segments of trawlers VL2440 and trawlers VL1218 in the Gulf of Riga, which are mostly fishing herring, the bycatch of sprat was also taken into account (Fig. 2, Annex III). The share of herring in mixed catches is approximately the same for both considered segments (about 91% in 2020).

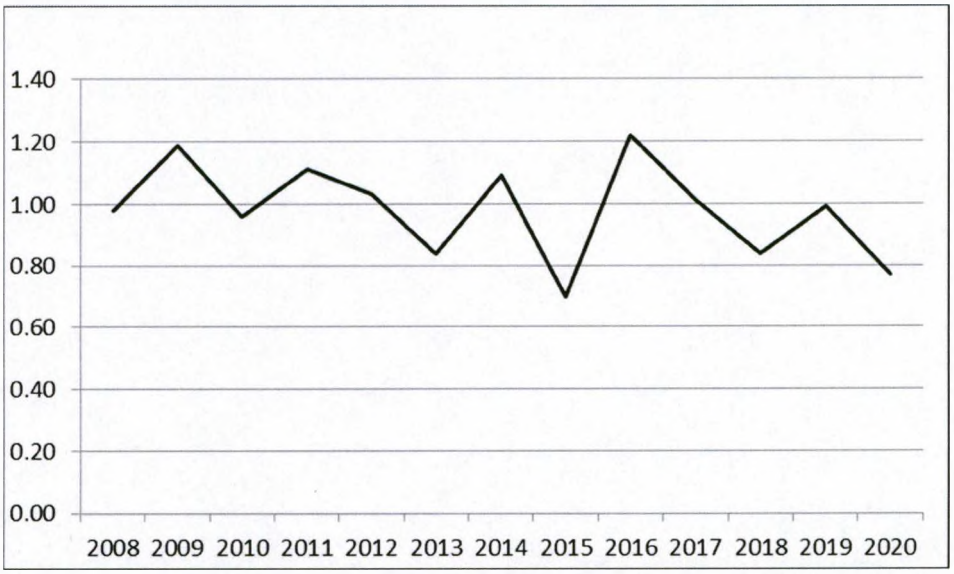

Fig. 2. The changes of biological indicator SHI during the period of 2008-2020 for the segments of trawlers VL1218 and VL2440 in the Gulf of Riga.

Long-term dynamics of the SHI parameter demonstrates quite widely fluctuation around reference point of "1" for period of 2008-2020 (Fig. 2). In 2020 average value of SHI parameter for both trawler segments in the Gulf of Riga was determined as 0.77, i.e. below reference point. It means that cluster of the segments (VL2440 and VL1218) in the Gulf of Riga is in a state of "balance between fleet capacity and the possibility of fish resources" with a possibility to increase landings.

Following the recommendations and applying the interpretation proposed in the guidelines it can be concluded:

- for the segment of trawlers VL2440 in the Baltic proper (SD 25-32) which mainly exploits the sprat stock (82%) with bycatch of herring SHI average value (1.21) indicates insignificant excess of "balance" level due to the high (2.19) SHI value for herring. However, herring in this region is a permanent and unavoidable bycatch, the share of which is about 3% to total Baltic catch of this stock. It can be stated that despite the formal evaluation, segment of trawlers VL2440 in the Baltic proper "is in balance";

- for two segments (trawlers VL1218 and VL2440) in the Gulf of Riga that rely on stocks of herring and sprat (bycatch) average value of SHI is 0.77, i.e., on the level of Sustainable Harvest Yield. It can be concluded that the cluster of the trawler segments in the Gulf of Riga is "in balance" with a possibility to increase landings;

- biological indicators for the stock of Baltic cod have not been assessed due to complete cod targeted fishery ban in the Eastern part of the Baltic Sea.

7.3. Economic Indicators

The methodology used for economic analysis have been proposed by *COMMUNICATION FROM THE COMMISION TO THE EUROPEAN PARLAMENT AND THE COUNCIL Guidelines for the analysis of the balance between fishing capacity and fishing opportunities according to Art 22 of Regulation (EU) No 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy (Brussels, 2.9.2014. COM (2014) 545 final*).

For the evaluation of the achievement of balance between fleet capacity and fishing opportunities in Latvian fishery from 2016 to 2020 three Baltic Sea fleet segments (VL0010; VL1218; VL2440) were selected and included in the analysis. Two indicators proposed by the guidelines were calculated for each fleet segment to evaluate whether fleet segments are economically sustainable in the long-term and short-term.

The economic indicators show the extent of economic over or under capitalization in a fleet, both in the short and in the long-term. In order to assess the profitability of the fleet in the long-term the indicator return on investment (ROI) was calculated. The second indicator applied - is ratio between current revenue and break-even revenue (CR/BER) reflects the financial capability of businesses with vessels in a given fleet segment to continue operating on a day-by-day basis. The indicator characterizes economic situation in the short-term.

The following categories of fishing vessels were excluded from the analysis:

- vessels over 40 meters operating in the Atlantic (area 27 and 34) due to the limited number of vessels and data confidentiality;
- inactive vessels due to the small number and low capacity;
- coastal vessels listed in the Fleet Register not engaged in commercial fishing and involved only in fishing for self-consumption.

For the calculations and analysis, the data collected in the frame of Data Collection (implemented under *Reg. (EU) 2017/1004; Commission Delegated Decision (EU) 2019/910* Table 5A Economic variables for the fleet and Table 4 Fishing activity variables) have been used.

The economic indicators have been calculated for the active Baltic Sea fishing fleet by economic segments provided in Table 5B *COM (EU) 2019/910*. All commercial vessels operated in the coastal zone were included in the segment VL0010.

According to the recommendations provided by the Workshop on Capital value estimations (Salerno, 7-10 October 2019) the Net profit from 2018 was calculated based on capital costs and capital value delivered from perpetual inventory method (PIM) which provides more precise economic assessment in macro perspective. Long-term interest rates for indicators calculation have been taken from the European Central Bank as Latvian average interest rate for the last five years, available at https://www.ecb.europa.eu/stats/financial_markets_and_interest_rates/long_term_interest_rates/html/index.en.html

7.3.1. Return on Investment (ROI)

Return on investment (ROI) shows investment profitability and is defined as Net profit after capital stock depreciation and then divided by capital asset value of the fleet. The subsidies are excluded from the calculation. According to the guidelines the ROI positive and greater than the low risk long-term interest rate shows positive return generated by the investment and suggesting that extraordinary profits are being generated, a sign of economic under-capitalization. Values of ROI positive but smaller than the low risk

interest rate would yield negative values for the indicator indicating that in the long-term it would more beneficial to invest elsewhere which is a sign that probably the fleet is overcapitalized and therefore economically inefficient. Negative ROIs can by themselves indicate economic over-capitalization. ROI results and calculations for each fleet segment are presented in Table 5 and Annex IV.

Table 5. Return on Investment (ROI – risk-free long-term interest rate %)

Fleet Segments	2016	2017	2018	2019	2020
VL0010 PGP	857	-17	31	-34	125
VL1218 TM	-0.76	49	110	-409	402
VL2440 TM	25	26	171	178	249

Application and interpretation

During the analyzed period from 2016 to 2020 the ROI indicator has stable positive values for the segment trawlers VL2440 that characterizes a cost-effective segment activity. The main factor is that the segment target species are herring and sprat which provide the necessary turnover for the segment. The sprat and herring catches contributed 48% and 45% respectively to total Latvian volume of landing as well as 49% and 41% respectively to total Baltic Sea value of landing in 2020.

In turn, the ROI indicator for the segment VL1218 trawlers operating in the Gulf of Riga was positive in 2016 and 2018 and 2020. The negative ROI was shown in 2017 and 2019 for the coastal vessels attributed to the segment VL0010 and segment VL1218. The changes for the segment VL1218 in 2017 and 2019 were occurred due to the sharp increase in total operating costs by 13% and 48% respectably. The negative effect for the segment VL0010 was also caused by the sharp increase in total operating costs by 84% in 2017. In its turn in 2019 the negative ROI in the segment VL0010 was caused by decrease in the volume and value of landing by 24% and 46% respectively due to the decline in average fish price in 2019.

In general, during the analyzed period 2016-2020 the ROI ratio greater than 1 indicates that the economic activity of the segments VL2440, VL1218 and VL0010 are cost-effective in the long-term. However, if the negative impact from the changes in fish price and too high average expenditures per vessel persist, it could directly be influential to the fishing fleet future profitability.

It should also be noted that the potential capacity can be exploited by 20-40% more for some vessels in segments VL1218 and VL2440. If intensity of fishing for some vessels in the segments VL1218 and 2440 will increase, the segments could obtain greater amount of catch and higher revenue from sales, which in turn could facilitate a profit growth.

The detailed ROI calculations for each fleet segment are presented in the section 7.3.1 and Annex IV.

7.3.2. Ratio of Current revenue to Break-even revenue (CR/BER)

The break-even revenue (BER) is the revenue required to cover both fixed and variable costs, that no losses are incurred and no profits are generated. The current revenue (CR) is the total operating income of the fleet segment, which consists of income from landings and non-fishing income. Data on subsidies were excluded from the calculation. In addition, income and expenditures from the fishing rights has 0 values due to the absence of fishing rights market in Latvia. The opportunity costs are included in the calculation.

According to the definition in the guidelines, the ratio between fleet current revenue and break-even revenue shows how close the current revenue of a fleet is to the revenue required for the fleet to break even in the short-term. If the ratio is greater than 1, then enough income is generated to cover variable, fixed and capital costs, indicating that the segment is profitable, with potential under-capitalization. Conversely, if the ratio is less than 1, insufficient income is generated to cover variable, fixed and capital costs, indicating that the segment is unprofitable, with potential over-capitalization. If the CR/BER result is negative, this means that variable costs alone exceed current revenue, indicating that the more revenue is generated, the greater the losses will be. Ratio between current revenue and break-even revenue (CR/BER) indicates a profitable fishery in the short-term. The CR/BER results and calculations for each fleet segment are presented in Table 6 and Annex V.

Table 6. Ratio of Current revenue to Break-even revenue CR/BER)

Fleet Segments	2016	2017	2018	2019	2020
VL0010 PGP	3.24	0.16	0.49	-0.24	2.08
VL1218 TM	0.16	0.42	1.05	-0.04	4.90
VL2440 TM	0.30	0.44	1.46	1.56	1.89

Application and interpretation

The trawlers segment VL2440 operating in the Baltic Sea offshore zone show CR/BER ratio positive and greater than 1 from 2018 to 2020, characterizing the segment profitability in the short-term. The segment of small boats less than 10 meters with polyvalent passive gears attributed to the segment VL0010 has the highest CR/BER ratio in 2016 and 2020. However, the results for 2019 for the coastal zone segment VL0010 and segment VL1218 trawlers operating in the Gulf of Riga show CR/BER ratio close to zero: -0.24 and -0.04 respectively, characterizes the payback of the fishery but not generation of the profit. The CR/BER results for the segment VL0010 in 2019 indicate that the insufficient income is generated to cover variable, fixed and capital costs signify the potential over-capitalization. The changes in the segment VL0010 were cause by the decline of average fish price for the coastal fish species and in the result decrease in total volume and value of landing by 24% and 46% respectively in 2019. In the result the segment VL0010 operated with loses EUR -0.436 million in 2019. The segment VL0010 contributed only 7% to total Latvian value of landing during analyzed period and does not have significant impact to the economic situation in the Latvian fishery. The CR/BER indicator fluctuates from year to year for all three segments and characterizes the stable profitable fishery for all three segments in 2020.

The detailed calculations and conclusions are presented in the section 7.3.2 and Annex V.

Annex I

Technical indicators - The Inactive Fleet Indicator (number and proportion of inactive vessels)

Values for trawlers VL1218

Year	Inactive vessels			% of total		
	No of vessels	kW	GT	No of vessels	kW	GT
2009	1	110	29	5.6	3.7	5.6
2010	1	110	29	5	3	3.4
2011	1	110	29	7.1	4.5	7
2012	1	110	29	8.3	5.2	8.1
2013	1	147	29	8.3	6.6	8.1
2014	0	0	0	0	0	0
2015	1	147	29	8.3	6.6	8.1
2016	1	147	29	8.3	6.6	8.1
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	0	0
2021	0	0	0	0	0	0

Values for trawlers VL2440

Year	Inactive vessels			% of total		
	No of vessels	kW	GT	No of vessels	kW	GT
2009	9	1857	831	11.7	8.8	8.3
2010	8	1790	788	11.4	9.7	9.4
2011	7	2392	1002	11.7	13.6	13.1
2012	7	1712	805	11.7	9.6	10.5
2013	5	1102	579	8.9	6.5	7.9
2014	2	699	214	3.8	4.3	3.1
2015	2	698	222	3.9	4.3	3.3
2016	2	607	230	4.4	4.1	3.7
2017	2	606	221	4.3	3.9	3.6
2018	4	1047	441	9.1	6.9	7.5
2019	6	1838	675	13.9	12.6	11.7
2020	8	2109	811	20	15.4	14.9
2021	9	1984	929	29	5.2	4.3

Annex II

Technical indicators - The Vessel Utilisation Indicator

Values for boats VL0010 using polyvalent passive gears

Year	Number of vessels	Capacity (average)	Effort (average)		Maximum effort (based on observed max)		Technical indicator	
		GT	days	GT*days	days	GT*days	days[1]	GT*days[2]
2009	259	2.3	37	88	206	477	0.18	0.19
2010	260	2.2	42	101	175	382	0.24	0.26
2011	252	2	38	84	157	321	0.24	0.26
2012	210	1.7	41	78	215	363	0.19	0.21
2013	200	1.7	44	84	205	347	0.21	0.24
2014	223	1.9	51	104	203	383	0.25	0.27
2015	204	1.9	53	102	223	420	0.24	0.24
2016	200	2	50	90	188	368	0.26	0.25
2017	196	1.89	52	98	193	365	0.27	0.27
2018	194	2	49	103	173	350	0.28	0.28
2019	196	2	47	94	171	342	0.27	0.27
2020	190	2.1	51	99	227	474	0.22	0.22
2021	192	2.2	47	109	222	488	0.21	0.22

Values for trawlers VL1218

Year	Number of vessels	Capacity (average)	Effort (average)		Maximum effort (based on observed max)		Technical indicator	
		kW	days	kW*days	days	kW*days	days[1]	kW*days[3]
2006	33	153	133	21987	236	36180	0.56	0.61
2007	31	153	144	24156	290	44239	0.5	0.55
2008	28	156	139	23495	231	36110	0.6	0.65
2009	23	160	142	24797	258	41269	0.55	0.6
2010	17	168	156	27244	207	34752	0.75	0.78
2011	16	172	172	31023	260	44590	0.66	0.7
2012	13	180	160	29651	232	41760	0.69	0.71
2013	11	183	176	32837	217	39770	0.81	0.83
2014	11	190	159	30281	197	37430	0.81	0.81
2015	11	188	161	30382	251	47256	0.64	0.64
2016	11	188	147	27997	221	41608	0.67	0.67
2017	11	190	178	34015	188	35737	0.94	0.95
2018	11	190	178	34225	189	35927	0.94	0.94
2019	11	194	145	28130	157	30458	0.92	0.92
2020	9	193	189	36604	189	36981	0.99	0.99
2021	9	204	168	34236	180	36720	0.93	0.93

Values for trawlers VL2440

Year	Number of vessels	Capacity (average)	Effort (average)		Maximum effort (based on observed max)		Technical indicator	
		kW	days	kW*days	days	kW*days	days[1]	kW*days[3]
2006	75	265	110	28526	199	52758	0.55	0.54
2007	70	270	118	32706	205	55431	0.58	0.59
2008	69	266	106	28741	184	48929	0.58	0.59
2009	60	308	91	25569	191	58780	0.48	0.44
2010	49	301	105	33199	176	52911	0.6	0.63
2011	48	308	102	30791	197	60606	0.52	0.51
2012	48	320	111	34344	214	68578	0.52	0.5
2013	46	321	115	37437	217	69549	0.53	0.54
2014	45	320	107	33801	180	57620	0.6	0.59
2015	44	326	113	36169	193	62870	0.59	0.58
2016	44	333	105	34050	184	61243	0.57	0.56
2017	44	336	118	39672	180	60590	0.66	0.65
2018	40	342	127	43414	173	60243	0.73	0.73
2019	37	357	105	37539	158	56459	0.66	0.66
2020	32	336	143	37388	155	56270	0.67	0.67
2021	29	368	100	37861	152	55973	0.66	0.68

[1] ratio between average days at sea and maximum days at sea.
[2] ratio between average GT*days at sea and maximum GT*days at sea.
[3] ratio between average kW*days at sea and maximum kW*days at sea.

Annex III

Biological indicators SHI for Latvian Fleet segments in 2018-2020

			2018				2019				2020			
Area	**Fleet segment**	**Parameters**	**COD 25-32**	**HER 25-29, 32 (excl.28.1)**	**SPR 22-32**	**HER GOR (28.1)**	**COD 25-32**	**HER 25-29, 32 (excl.28.1)**	**SPR 22-32**	**HER GOR (28.1)**	**COD 25-32**	**HER 25-29, 32 (excl.28.1)**	**SPR 22-32**	**HER GOR (28.1)**
SD 25-32	**VL2440 trawlers**	**Catch,t**	1210	9837	35042		210	7506	34821		49	5825	27029	
		Fc		0.28	0.32			0.45	0.38			0.46	0.37	
		Fmsy		0.22	0.26			0.28	0.26			0.21	0.37	
		F/Fmsy		**1.27**	**1.23**			**1.61**	**1.46**			**2.19**	**1.00**	
		F/Fmsy for segment		**1.24**				**1.49**				**1.21**		
28.1 Gulf of Riga (GOR)	**VL1218 trawlers**	**Catch,t**			937	6540			996	6426			709	7264
		Fc			0.32	0.25			0.38	0.28			0.37	0.24
		Fmsy			0.26	0.32			0.26	0.32			0.37	0.32
		F/Fmsy			**1.23**	**0.78**			**1.46**	**0.88**			**1.00**	**0.75**
		F/Fmsy for segment			**0.84**				**0.95**				**0.77**	
	VL2440 trawlers	**Catch,t**			1120	7985			2893	9526			1155	11898
		Fc			0.32	0.25			0.38	0.28			0.37	0.24
		Fmsy			0.26	0.32			0.26	0.32			0.37	0.32
		F/Fmsy			**1.23**	**0.78**			**1.46**	**0.88**			**1.00**	**0.75**
		F/Fmsy for segment			**0.84**				**1.01**				**0.77**	

Annex IV

ROI calculation

Year	Values for calendar year (€000)	VL0010PGP	VL1218TM	VL2440TM
2016	Income from landings + other income	1 072 810	2 429 772	14 082 390
	Low risk long term interest rate %	2.38	2.38	2.38
	Crew costs + unpaid labour costs + fuel costs + repair & maintenance costs + other variable costs + non variable costs	314 188	1 909 862	11 171 380
	Capital costs (depreciation + interest payments)	26 955	479 572	555 351
	Net profit = (Income from landings + other income) – (crew costs + unpaid labour + energy costs + repair and maintenance costs + other variable costs + non variable costs + depreciation)	731 667	40 339	2 355 659
	Fleet capital asset value (vessel replacement value + estimated value of fishing rights)	85 093	2 490 057	8 456 737
	ROI = Net profit / capital asset value %	**859.84**	**1.62**	**27.86**
	ROI – risk-free long-term interest rate %	**857.46**	**-0.76**	**25.47**
2017	Income from landings + other income	1 223 394	2 871 084	17 618 796
	Low risk long term interest rate %	1.61	1.61	1.61
	Crew costs + unpaid labour costs + fuel costs + repair & maintenance costs + other variable costs + non variable costs	1 097 354	2 186 827	13 148 491
	Capital costs (depreciation + interest payments)	303 966	121 156	2 048 458
	Net profit = (Income from landings + other income) – (crew costs + unpaid labour + energy costs + repair and maintenance costs + other variable costs + non variable costs + depreciation)	-177 926	563 101	2 421 846
	Fleet capital asset value (vessel replacement value + estimated value of fishing rights)	1 150 165	1 119 599	8 630 287
	ROI = Net profit / capital asset value %	**-15.47**	**50.29**	**28.06**
	ROI – risk-free long-term interest rate %	**-17.08**	**48.68**	**26.45**
2018	Income from landings + other income	2 653 268	2 999 991	17 436 858
	Low risk long term interest rate %	0.90	0.90	0.90
	Crew costs + unpaid labour costs + fuel costs + repair & maintenance costs + other variable costs + non variable costs	2 027 530	2 619 276	12 373 113
	Capital costs (depreciation + interest payments)	171 043	38 166	344 964
	Net profit = (Income from landings + other income) – (crew costs + unpaid labour + energy costs + repair and maintenance costs + other variable costs + non variable costs + depreciation)	454 696	342 549	4 718 780
	Fleet capital asset value (vessel replacement value + estimated value of fishing rights)	1 417 407	308 637	2 750 183
	ROI = Net profit / capital asset value %	**32.08**	**110.99**	**171.58**
	ROI – risk-free long-term interest rate %	**31.18**	**110.09**	**170.68**

2019	Income from landings + other income	1 173 466	3 809 379	14 546 283
	Low risk long term interest rate %	0.72	0.72	0.72
	Crew costs + unpaid labour costs + fuel costs + repair & maintenance costs + other variable costs + non variable costs	1 449 279	5 031 552	9 588 297
	Capital costs (depreciation + interest payments) *	160 922	38 166	325 640
	Net profit (economic) = (Income from landings + other income) – (crew costs + unpaid labour + energy costs + repair and maintenance costs + other variable costs + non variable costs + depreciation)	-436 736	-1 260 339	4 632 345
	Fleet capital asset value (vessel replacement value + estimated value of fishing rights)	1 313 633	308 639	2 598 540
	ROI = Net profit / capital asset value %	**-33.25**	**-408.35**	**178.27**
	ROI – risk-free long-term interest rate %	**-33.97**	**-409.07**	**177.55**
2020	Income from landings + other income	2 608 197	2 953 103	16 237 019
	Low risk long term interest rate %	0.50	0.50	0.50
	Crew costs + unpaid labour costs + fuel costs + repair & maintenance costs + other variable costs + non variable costs	1 190 815	1 877 296	10 481 597
	Capital costs (depreciation + interest payments)*	160 507	32 100	277 761
	Net profit (economic) = (Income from landings + other income) – (crew costs + unpaid labour + energy costs + repair and maintenance costs + other variable costs + non variable costs + depreciation)	1 256 876	1 043707	5 477 662
	Fleet capital asset value (vessel replacement value + estimated value of fishing rights)	1 003 297	259 541	2 193 438
	ROI = Net profit / capital asset value %	**125.27**	**402.14**	**249.73**
	ROI – risk-free long-term interest rate %	**124.77**	**401.64**	**249.23**

* Net profit (economic) from 2018, calculated by PIM; Net profit (financial) for 2016-2017 (based on data collected by Latvian Central Statistical Bureau).

Annex V

Ratio of Current revenue to Break-even revenue (CR/BER) calculation

Year	Nr.	Values for a calendar year (€'000) Use Segment total figures	VL0010 PGP	VL1218 TM	VL2440 TM
2016	1	Current revenue (CR) = Income from landings + other income	1 072 810	2 429 772	14 082 390
	2	Fixed costs = Non variable costs + depreciation +opportunity of capital	236 275	6 977 332	25 407 456
	3	Variable costs = Crew costs + Unpaid labour costs + Energy costs + Repair & maintenance costs + Other variable costs	307 574	1 343 832	6 464 632
	4	BER = 2 / (1 - [3 / 1])	331 241	1 561 1667	46 968 901
	5	**CR / BER = 1 / 4**	**3.24**	**0.16**	**0.30**
2017	1	Current revenue (CR) = Income from landings + other income	1 223 394	2 871 084	17 618 796
	2	Fixed costs = Non variable costs + depreciation +opportunity of capital	2 420 402	2 141 086	20 625 599
	3	Variable costs = Crew costs + Unpaid labour costs + Energy costs + Repair & maintenance costs + Other variable costs	832 684	1 969 451	8 466 112
	4	BER = 2 / (1 - [3 / 1])	7 578 781	6 817 895	39 704 008
	5	**CR / BER = 1 / 4**	**0.16**	**0.42**	**0.44**
2018	1	Current revenue (CR) = Income from landings + other income	2 653 268	2 999 991	17 436 858
	2	Fixed costs = Non variable costs + depreciation +opportunity of capital	1 623 268	1 296 746	4 871 004
	3	Variable costs = Crew costs + Unpaid labour costs + Energy costs + Repair & maintenance costs + Other variable costs	1 850 971	1 638 470	10 322 238
	4	BER = 2 / (1 - [3 / 1])	5 368 291	2 857 263	11 938 095
	5	**CR / BER = 1 / 4**	**0.49**	**1.05**	**1.46**
2019	1	Current revenue (CR) = Income from landings + other income	1 173 466	3 809 379	14 546 283
	2	Fixed costs = Non variable costs + depreciation +opportunity of capital	1 119 196	1 424 715	4 934 508
	3	Variable costs = Crew costs + Unpaid labour costs + Energy costs + Repair & maintenance costs + Other variable costs	1 436 822	3 867 224	6 850 378
	4	BER = 2 / (1 - [3 / 1])	-4 986 926	-93 825 359	9 326 875
	5	**CR / BER = 1 / 4**	**-0.24**	**-0.04**	**1.56**

2020	1	Current revenue (CR) = Income from landings + other income	2 608 197	2 953 103	16 237 019
	2	Fixed costs = Non variable costs + depreciation +opportunity of capital	700 721	234 198	4 944 136
	3	Variable costs = Crew costs + Unpaid labour costs + Energy costs + Repair & maintenance costs + Other variable costs	1 152 249	1 804 968	6 911 940
	4	BER = 2 / (1 - [3 / 1])	1 255 278	602 378	8 608 832
	5	**CR / BER = 1 / 4**	**2.08**	**4.90**	**1.89**

Annex VI

The statement of balance between fleet capacity and fishing opportunities for Latvia

VL1218TM								
Indicator	**Definition**	**ICES area**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
ECONOMIC1	**ROI**	Area 27 SD 28.1	negative ROI over-capitalization	positive ROI under-capitalization	positive ROI under-capitalization	negative ROI over-capitalization	positive ROI under-capitalization	NA*
ECONOMIC2	**CR/BER**	Area 27 SD 28.1	0<0.16<1 current revenue covers the current costs	0<0.42<1 current revenue covers the current costs	1<1.05 economically profitable with potential under capitalization	-0.04<0<1 economically unprofitable with potential over - capitalization	1<4.90 economically profitable with potential under capitalization	NA*
TECHNICAL1	**IFI - Proportion of inactive vessels**	Area 27 SD 28.1	8.3 (<10%)	0	0	0	0	0
TECHNICAL2	**VUI-Vessel utilisation (Ratio between average and maximum effort per vessel, kW*days)**	Area 27 SD 28.1	0.67 (<0.7)	0.95	0.94	0.92	0.99	0.93
BIOLOGICAL1	**SHI - Ratio between F estimated and F target (MSY)**	Area 27 SD 28.1	1.21	1.01	0.84	0.95	0.77	
BIOLOGICAL2	**SARI - Stock-at-risk**	Area 27 SD 28.1	Not calculated					

*NA – not applicable. The economic data for 2021 will be available in November of 2022.

VL2440TM								
Indicator	**Definition**	**Area**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
ECONOMIC1	**ROI**	Area 27 SD 22-32	positive ROI under-capitalization	positive ROI under-capitalization	positive ROI under-capitalization	positive ROI under-capitalization	positive ROI under-capitalization	NA*
ECONOMIC2	**CR/BER**	Area 27 SD 22-32	0<0.30<1 current revenue covers the current costs	0<0.44<1 current revenue covers the current costs	1<1.46 economically profitable with potential under capitalization	1<1.56 economically profitable with potential under capitalization	1<1.89 economically profitable with potential under capitalization	NA*
TECHNICAL1	**IFI - Proportion of inactive vessels**	Area 27 SD 22-32	4.4 (<10%)	4.3 (<10%)	9.1 (<10%)	13.9	20	29
TECHNICAL2	**VUI-Vessel utilisation (Ratio between average and maximum effort per vessel, kW*days)**	Area 27 SD 22-32	0.56 (<0.7)	0.65 (<0.7)	0.73	0.66 (<0.7)	0.67 (<0.7)	0.68 (<0.7)
BIOLOGICAL1	**SHI - Ratio between F estimated and F target (MSY)**	Area 27 SD 22-32	0.86	1.11	1.24	1.49	1.21	
		Gulf of Riga	1.22	1.01	0.86	1.01	0.77	
BIOLOGICAL2	**SARI - Stock-at-risk**	Area 27 SD 22-32	Not calculated					

*NA – not applicable. The economic data for 2021 will be available in November of 2022.

VL0010PGP								
Indicator	**Definition**	**Area**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
ECONOMIC1	**ROI**	Area 27 SD 26, 28	positive ROI under-capitalization	negative ROI over-capitalization	positive ROI under-capitalization	negative ROI over-capitalization	positive ROI under-capitalization	NA*
ECONOMIC2	**CR/BER**	Area 27 SD 26, 28	1<3.24 economically profitable with potential under capitalization	0<0.16<1 current revenue covers the current costs	0<0.49<1 current revenue covers the current costs	-0.24<0<1 economically unprofitable with potential over - capitalization	1<2.08 economically profitable with potential under capitalization	NA*
TECHNICAL1	**IFI - Proportion of inactive vessels**	Area 27 SD 26, 28	Not calculated					
TECHNICAL2	**VUI-Vessel utilisation (Ratio between average and maximum effort per vessel, kW*days)**	Area 27 SD 26, 28	0.25 (<0.7)	0.27 (<0.7)	0.28 (<0.7)	0.27 (<0.7)	0.22 (<0.7)	0.22 (<0.7)
BIOLOGICAL1	**SHI - Ratio between F estimated and F target (MSY)**	Area 27 SD 26, 28	Not calculated					
BIOLOGICAL2	**SARI - Stock-at-risk**	Area 27 SD 26, 28	Not calculated					

*NA – not applicable. The economic data for 2021 will be available in November of 2022.