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The Annual Report on the Fishing Fleet of Estonia 2020

Summary on the balance between fishing opportunities and fishing capacity

The annual report evaluates the balance between fishing opportunities and fishing capacity of Estonia's fishing fleet in year 2020. Compared to 2019, the number of vessels increased by 80 vessels in 2020. Also, both total main engine power and gross tonnage increased, by 2945 kW and 1877 GT. Throughout the period, Estonia has followed the entry-exit scheme as foreseen under the common fisheries policy and fleet capacity is in compliance with the reference levels.

Estonia's marine fishery consists of 3 national fleet segments – Baltic Sea coastal fleet (DCF vessel segments PG VL0010 and PG VL1012), Baltic Sea trawling fleet (TM VL1218, TM VL1824, TM VL2440) and high seas fishing fleet (VL40XX).

For the calculation of the balance indicators the Guidelines of the 02.09.2014 document COM(2014) 545 final are used. The calculation of indicators is based on the latest data available on STECF JRC web-page, report STECF 20-11 - Balance capacity - indicator table.xlsx. For the evaluation, altogether 6 indicators have been calculated – SHI, SAR, ROI, CR/BR, inactive fleet indicator and vessel utilisation indicator. As data availability varies by indicators, then the viewed time period differs also. For example, for biological indicators a time period 2014-2018 is used as there are no newer data in the STECF report 20-11 available. For economic indicators a time period 2015-2019 is used as 2020 data is not yet available nationally. For vessel use indicators, the years 2015-2020 are viewed.
Due to the lack of data in STECF report 20-11, SAR is present only for PG VL0010 and SHI only for the Baltic Sea fleet segments and not for fleet segment VL40XX. The economic indicators for fleet segment VL40XX will be sent with a separate report due to the confidentiality restrictions (low number of vessels in segment).
Lack of data for most recent years and for some fleet segments in STECF report 20-11 makes it more difficult to compose a comprehensive analysis of the balance between fleets, fishing possibilities and fishing capacity.

Balance indicators
Fleet segments PG VL0010 and PG VL1012. SHI was above 1 in 2015-2018 in both segments. For SAR, fleet segment PG VL0010 is considered to be out of balance in years 2016-2018. While VL1012 depends entirely on Baltic herring, then HER 3D-R30 catches made only around 8% of segment's catches in 2020. Gulf of Riga herring, which makes most of VL1012 catches, has been evaluated by ICES as being fished at Fmsy in 2017-2019, thus the negative value of SHI in segment VL1012 according to STECF report 20-11 is not understandable. Fleet segment VL0010 practices mixed fishery and the proportion of Atlantic salmon, both in catches (0.3%) and values (2%), is not significant. The only reason for negative outcome of SAR is that fleet segment VL0010 catches 100% of Gulf of Finland (FAO 27.IIId.32) Atlantic salmon Estonia's quota. Atlantic salmon is by-catch species in mixed fishery.
During 2015-2019, ROI has fluctuated in both segments (VL0010 and VL1012). While ROI was well above low risk long term interest rate in 2016 and 2017 for VL0010 and in 2015-2017 for VL1012, then the ROI was negative in 2018 and 2019 for VL0010 and for VL1012 in 2018. Thus the situation has worsened in recent years, but as in five-year span there have been better results, then it is too early to conclude that these segments are economically not

viable. The same applies also for CR/BER, where years 2015-2017 have shown decent results and lower results in 2018 and 2019 might be temporary results and no long-term conclusions shouldn't be made. Vessel use indicator has been all years (2015-2020) very low - below 0.6 in VL1012 and below 0.4 in VL0010 – and decreased further in 2020. For the reasons of high seasonality, diversification of economic activities and the dependence of vessel use on target species, fishing methods, weather conditions etc., the calculation of vessel use indicator has little value in coastal fishery with passive gears. In addition, year 2020 was a rather exceptional year due to COVID-19 restrictions and especially fisheries directing high-value species (European perch etc.) that are exported mostly to Western Europe were affected the most due to the suspension of export. The economic effects of this will be seen in the coming years.

Fleet segments TM VL1218, TM VL1824, TM VL2440. SHI was above 1 in 2014-2018 in all segments. All Baltic Sea trawling vessels depend on Baltic herring and sprat stocks and thus the state of these stocks affects these fleet segments directly. ROI has been above 1, but below 5-year average low risk long term interest rate in two years (2015 and 2016) and well above interest rate in more recent years (2017-2019). CR/BER has been above 1 since 2015. Thus, these segments are considered to be economically viable, both in short-term and long-term. Also, the overall trend is positively increasing according to the STECF report 20-11. For vessel use indicator, fleet segments TM VL1824 and TM VL2440 have been rather stable, with low number of inactive vessels and vessel use indicator above 0.7 for the whole period of 2015-2020. Fleet segment TM VL1218 has high number of inactive vessels and very low vessel use indicator for the whole period.

Fleet segment VL40XX. There is no data available on SAR and SHI in STECF report 20-11. Considering that the share of catches of Northern prawn in the Barents sea has been around 50% of all distant fleet catches, and the state of the Northern prawn stock in the Barents sea is good according to the ICES advice, then large share of the fishery can be considered to be sustainable in terms of biological indicators. Groundfish fishery taking place in the NAFO RA is more dependent on fish stocks, which need more attention to stay in balance. Fleet segment VL40XX has the highest and most homogenous vessel use of all Estonia's fleet segments. The results of economic indicators are presented in a separate report.

<u>Conclusions</u>

Based on the calculations and analysis of the balance indicators presented in section F, it can be stated that in general, all fleet segments, except TM VL1218, are balanced. The evaluation of balance indicators shows that an overall assessment of the situation in Estonia's fleet is rather positive – the structural balance has been achieved and there is some room left for adapting with the changes in stocks. Negative values for single years or for single indicators should not be overemphasized as they may not accurately reflect general trends in fleet segments. The necessary management measures for Baltic herring (HER 3D-R30) and sprat stocks are implemented at the EU level to achieve sustainable state of both stocks. As ITQ system is used in the Estonian Baltic Sea trawling fishery, then vessel operators make themselves necessary changes in the fleet and in vessels usage rate. This could be already seen in the results of 2020 vessel usage rate. But there must remain flexibility for the sector if the state of sprat and herring stocks should improve. It is not reasonable to make long term decisions based on stocks situation in short period as the capacity is needed when fish stocks will increase in order to utilize allocated fishing possibilities.

In analysing balance indicators, it is important also to refer to the statement by the Expert group in Expert Working Group EWG-17-08 report (in document STECF-18-14), that *the indicator values for all of the indicators being used to assess the balance between capacity and fishing opportunities merely inform on whether fleet segments should be scrutinised*

further to determine whether an action plan is warranted. The indicator values (either singly or in combination) cannot be considered reliable metrics to identify which fleet segments require an action plan.

Due to above mentioned reasons the assessment does not clearly demonstrate that the fishing capacity is not effectively balanced with fishing opportunities and does not identify structural overcapacity. Moreover, all Baltic Sea stocks analysed in the assessment are subject to quota management and the Estonian fisheries management is based on ITQ-s and ITE-s, which are effective tools for vessel owners for keeping their fishing capacity in structural balance with their fishing opportunities. Therefore, Estonia does not plan to prepare an action plan. Ministry of Rural Affairs is closely following the situation (stock status and vessel usage) and can take less finite measures than permanent cessation of vessels if necessary. For example, free fishing capacity can be transferred from one fleet segment to another for ensuring sustainable use of fish resources according to the national Fishing Act.

Section A

Description of fleets

On EU level, all Estonian marine fishing vessels belong into the MFL segment. On national level, the Regulation of the Minister of Rural Affairs No 79 of 28.11.2017 determines the criteria for grouping fishing vessels into national fleet segments based on overall length (LOA), fishing gear, main target species and fishing grounds. The national segments for marine fishing vessels are: the Baltic Sea trawling segment (4S1), high seas fishery segment (4S3) and coastal fishing segment (4S2). An overview of fishing vessels in the Estonian marine fishing fleet at the end of 2020, together with their main characteristics, is given in the table below.

Table 1. Estonian marine fishing fleet as of 31 December 2020 according to the Estonian fishing fleet register.

National segment	DCF fleet segment	No of vessels	kW	GT	Average age	Average kW	Average GT	Average length (m)
4S2	PG VL0010	1793	18272.6	1826.3	23	10.2	1.0	5.3
	PG VL1012	70	3544.3	479.8	30	50.6	6.9	11.6
4S1	TM VL1218	4	645.6	86	30	161.4	21.5	14.1
	TM VL1824	6	1914.4	746	30	319.1	124.3	22.7
	TM VL2440	18	7006	2872	35	389.2	159.6	27.0
4S3	VL40XX	7	18193	11598	28	2599	1656.9	60.4
Total		**1 898**	**49575.94**	**17608.08**				

Fleet segments PG VL0010 and PG VL1012

The Baltic Sea coastal fishing segment is divided between two distinctive fleet segments PG VL0010 and PG VL1012. These vessels are used in the Baltic Sea coastal waters up to 12 nautical miles or up to the 20-metre isobaths.

Fleet segment PG VL0010 has the largest number of vessels, 94% of the whole Estonian marine fishing fleet and their total engine power and gross tonnage make up 37% and 10% of the fleet respectively. As can be seen from the Table 2 below, total landings by vessels in fleet segment PG VL0010 are relatively small considering the number of vessels, making only 5% of the total landings of marine fisheries. These vessels are used for fishing for different

species (European perch, smelt, Baltic herring, flounder, pike-perch, roach, northern pike, etc.) with various passive gears.

Fleet segment PG VL1012 comprises of vessels used for fishing for Baltic herring in the Baltic Sea with stationary uncovered pound nets, mostly in a short spring season from April to June. The total number of vessels in fleet segment PG VL1012 is relatively small, comprising 4% of the whole fleet, and their total engine power and gross tonnage make up only 7% and 3% of the fleet respectively, but quantities landed by these vessels make 10% of the total landings of marine fisheries and 24% of all Baltic herring landings.

Fleet segments TM VL1218, TM VL1824 and TM VL2440

By DCF classification, the Baltic Sea trawling segment consists of three fleet segments: TM VL1218, TM VL1824 and TM VL2440. These vessels are used for fishing sprat and Baltic herring in the Baltic Sea. Cod fishing has lost its importance as cod stocks are in decline and fishing grounds are farther away, thus making fishing for cod not profitable. There were no vessels specialised on cod fishing in 2020. Vessels that were used for cod fishing before are fishing now for sprat and Baltic herring or have been removed from the fleet. Combined, vessels of segments TM VL1218, TM VL1824 and TM VL2440 make up only 1% of the total number of vessels, but their total engine power and gross tonnage make up 19% and 21% of the fleet respectively. Total landings by the Baltic Sea trawling fleet were 44 919 tonnes, which corresponds to 63% of total landings from marine commercial fisheries in 2020.

Fleet segment VL40XX

Length class VL40XX comprises of distant water trawling vessels used for fishing various regulated and non-regulated species in the Atlantic Ocean. Seven vessels in length class VL40XX make up to 37% of the total engine power and 66% of the total gross tonnage of the whole fleet. Total landings by these vessels were 14 893 tonnes in 2020, which made 21% of total landings from marine commercial fisheries.

Table 2. Main fisheries and total landings in year 2020.

DCF fleet segment	National segment	Main fishing area(s)	Main target species	Main gear	Total landings (t)
PG VL0010	4S2	Baltic Sea, coastal	European perch, Baltic herring, smelt, European flounder	FYK, FPN, GNS	3805.6
PG VL1012			Baltic herring	FPN	7250.9
TM VL1218	4S1	Baltic Sea	Baltic herring, sprat	OTM, PTM	140
TM VL1824				OTM	11316.9
TM VL2440				OTM	33462.2
VL40XX	4S3	NAFO, NEAFC, SVA, GRL	Northern prawn, redfish, cod, Greenland halibut, American plaice	OTB	14893.1
Total					**70868,8**

Link with fisheries

Commercial fishery in Estonia is based on the system of individual transferrable quotas (ITQ) and in small scale coastal fishery individual transferrable effort (ITE), allocated to companies, i.e. fishing rights owners, based on their 3-year historical fishing rights.

Baltic Sea trawling fleet catches mainly herring and sprat, which are subject to quotas agreed on EU level and allocated as individual fishing quotas to companies based on their 3-year historical fishing rights. This kind of management ensures that companies themselves are keeping optimal capacity for utilization of their fishing opportunities.

In case of small scale coastal fishery an ITE system is applied, where national limits on gears in order to limit fishing effort are set based on national scientific advice, and the total number is divided between fishing rights owners based on their 3-year historical fishing rights.

It is allowed to swap given year's fishing quotas with other companies or with other countries. Since the beginning of 2018, fishing rights owner cannot swap quota, received from another Estonian company, to another Member State. This is to ensure that swapped quantities are used by the receiving company itself and not just used for further transactions with other Member States. A company has the right to waive or sell its historical fishing rights. If the fishing rights owner has not paid for its current year's allocation, the owner will not be granted a fishing authorisation and the allocated quantity is divided between other applicants. If a fishing authorisation has not been issued or catches have not been reported under the fishing authorisation for a three consecutive years, the fishing rights owner loses its historical fishing rights.

Fishing is allowed only if a relevant fishing authorisation has been issued, irrespective whether fishing for regulated or non-regulated species, vessel length or whether the vessel has been used at all. There are two types of fishing authorisations: fisherman's fishing authorisation and fishing vessel's fishing authorisation. Fishing vessel's fishing authorisation is issued for a specific fishing vessel when fishing with vessels in fleet segments 4S1 and 4S3 and that vessel must have a valid fishing licence.

Fisherman's fishing authorisation is in use in coastal fisheries for vessels below 10 m length overall, where ITE system is in use and allowed fishing effort - the type and number of fishing gears – is marked on a fishing authorisation. Fishing authorisations are issued to a fishing rights owner and authorisation is not directly linked with a specific vessel. Not all fishing is conducted with fishing vessels (for example ice-fishing in winter, fishing in shallow waters). Starting from 1 December 2017, fisherman's fishing authorisation is given for a specific vessel for vessels of fleet segment PG VL1012 using pound nets to fish for Baltic herring or demersal saine to fish for European flounder. As coastal fishing uses mostly passive gears, capacity management through vessel kW and GT is not appropriate tool for regulating effort in this kind of fisheries. Fishing effort in the fishery where passive gear is used depends on number of gear multiplied with time when gear is actually fishing. Therefore, limitation of capacity in this kind of fishery is not relevant at all and has no reasonable justification for management and protection of fish stocks. However, vessels that are used must be registered in the fishing fleet register and must have a valid fishing licence.

Estonia has fishing opportunities in the Baltic Sea, in the NAFO and NEAFC Regulatory Areas, and shrimp fishing days in the Svalbard area. In addition, Estonia's distant water fishing vessels fish for non-regulated species in the Barents Sea and NAFO. In coastal fishery, most of the target species are non-regulated on EU-level, but regulated by national effort limitation scheme (ITE).

Baltic Sea fisheries

The evolution of Estonia's initial fishing opportunities (before swaps, as adopted with the EU TAC regulation) in the Baltic Sea in the last five years is shown below in chart 1. Subdivisions 25-27, 28.2, 29 and 32 Baltic herring TAC decreased substantially in 2019 and 2020 compared to 2018. At the same time Gulf of Riga Baltic herring quota increased in 2019 and 2020 compared to 2018. While sprat quota was increased in 2017-2019, then the 2020 quota was considerably lowered (22%). In general, there has been no improvements in cod and salmon fishing opportunities. For cod stocks recovery, no directed fishery of cod was allowed in Subdivisions 24 and 25-32 in 2020 according to the EU Baltic Sea TAC regulation (2019/1838).

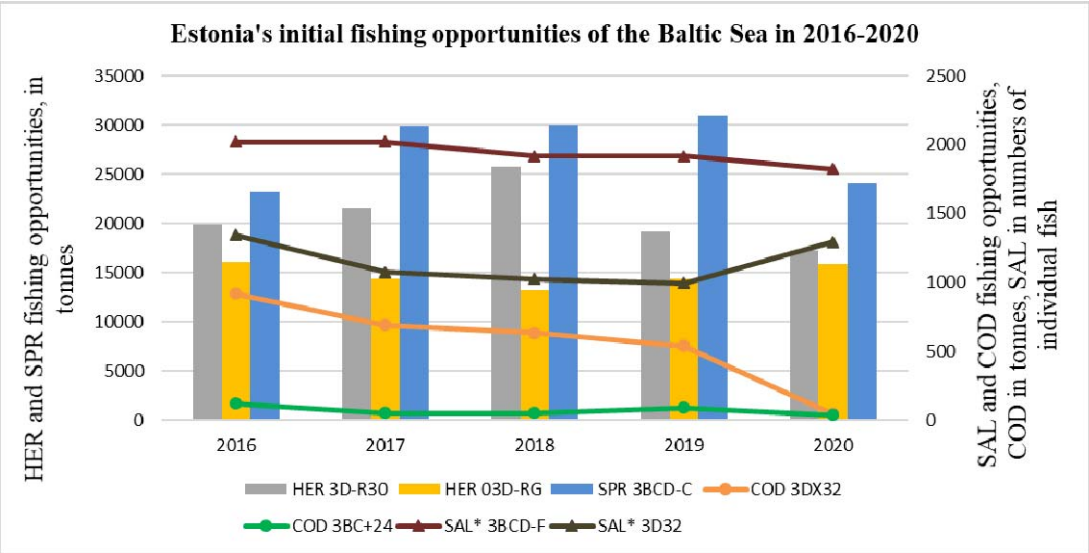

Chart 1. Estonia's initial fishing opportunities in the Baltic Sea in the years 2016-2020.

Landings of regulated species and total landings in 2020 by the Baltic Sea coastal and trawling fleets are shown in the table 3 below. Baltic herring is an important species both for the coastal and trawling fleets. In 2020, 73% of all landed quantities in the Baltic Sea coastal fleet and 46% in the Baltic Sea trawling fleet, was Baltic herring. Catches of the Atlantic salmon and cod have been marginal in all Baltic Sea fleet segments. Atlantic salmon was received only by the coastal fleet segment PG VL0010 as a by-catch in mixed fishery. The dependence on species regulated on EU-level is the smallest in the fleet segment PG VL0010, which targets various high-valued species. Other Baltic Sea fleet segments specialize on the exploitation of the EU-level regulated species – sprat and Baltic herring.

Table 3. Landings of regulated species and total landings in the Baltic Sea in 2020 (in tonnes).

DCF fleet segment 2020	**COD 3DX32**	**COD 3BC+24**	**HER 3D-R30**	**HER 03D-RG**	**SAL 3BCD-F**	**SAL 3D32**	**SPR 3BCD-C**	**Total landings (t)**
PG VL0010	1.4	0.0	741.9	345.0	1.5	9.3	0.3	3805.6
PG VL1012	0.0	0.0	562.2	6432.5	0.0	0.0	0.0	7250.9
TM VL1218	0.0	0.0	91.4	0.0	0.0	0.0	48.6	140.0
TM VL1824	0.0	0.0	3622.1	1325.2	0.0	0.0	6366.4	11316.9
TM VL2440	0.0	0.0	11359.8	4127.9	0.0	0.0	17894.3	33462.2
Total	**1.4**	**0.0**	**16377.4**	**12230.6**	**1.5**	**9.3**	**24309.7**	**55975.7**

Overall, 85.9% of HER 3D-R30, 87.8% of HER 03D.RG, 95.3% of SPR, 8.4% of COD 3DX32, 0% of COD 3BC+24, 24.1% of SAL 3BCD-F and 100% of SAL 3D32 Estonia's year 2020 quotas (final quotas after quota swaps with other Member States) were exhausted. The level of quota usage for both Baltic herring stocks and sprat were lower than in previous, 2019 year, mostly due to unfavourable weather conditions at the first quarter of the year, but to some extent also due to the uncertainties caused by the COVID-19.

Concerning species targeted by coastal fleet, which are not regulated at the EU-level, according to the 2019 report from the University of Tartu Estonian Marine Institute, the general recommendation, as in previous years, is not to increase fishing effort. The report includes also the recommendation to decrease fishing effort, to decrease catches of juveniles and to increase the efficiency of protecting fish during spawning season. Thus, the number

and type of fishing gear allowed to use in coastal fishery in 2020 was kept mostly at the same level as in previous years.

Catches of the main species, excluding EU-level regulated stocks, and total catch by coastal fleet (PG VL0010 and PG VL1012) in 2016 - 2020 are shown in chart 2 below. The main species other than EU-level regulated stocks caught by coastal fleet are European perch, European smelt, European flounder, pike-perch, roach and garfish.

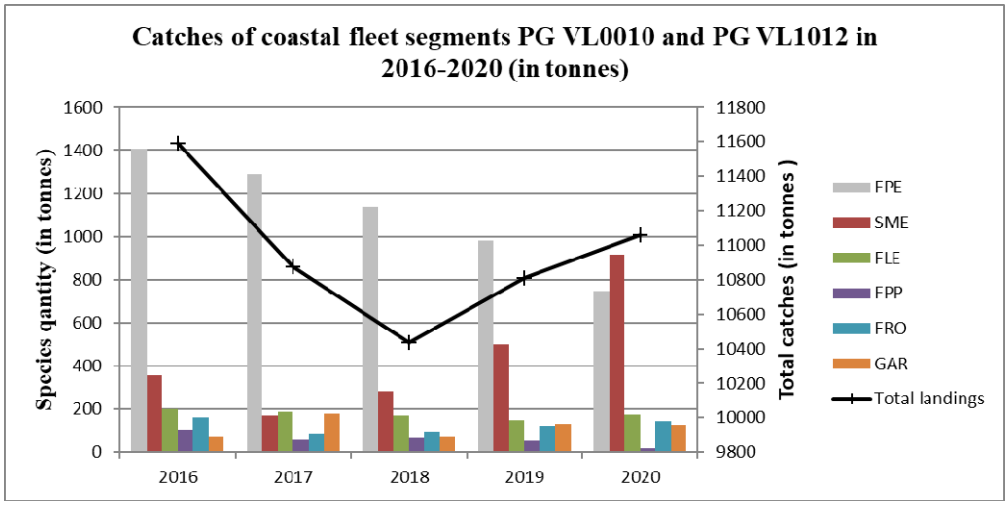

Chart 2. Catches of main non-regulated species, excluding Baltic herring, and total catch by coastal fleet (PG VL0010 and PG VL1012) in 2016 – 2020.

Distant water fisheries (VL 40XX)

After several years of reductions in NAFO 3L Northern prawn quota the fishery closed finally in 2015. The moratoria of NAFO 3M Northern prawn ended in 2020, but the fishing sector has been cautious about returning to the fishery. Altogether, there hasn't been any shrimp fishing in NAFO RA by Estonian fishing vessels since 2015. Thus, fishing for non-regulated species (mostly Northern prawn in the Barents Sea), cooperation for quota swaps, charter agreements and finding new fishing techniques have become more important for Estonia's distant water fishing fleet. Also, the importance of combined fishery of Northern prawn, American plaice and cod in Barents Sea has increased over the years. NAFO RA has remained important fishing ground for various groundfish species – cod, redfish, Greenland halibut, skates.

The proportion between Estonia's own initial fishing opportunities and total landings in 2020 is shown in the table 4 below. The biggest difference in Estonia's own fishing opportunities and actual landings is in the NEAFC RA, where Estonia owns various small fishing opportunities, most of them for deep sea species. Estonia has not used these deep sea fishing opportunities since 2007 as the allocated quantities are too small to conduct targeted fishing. These fishing opportunities are exchanged for other fishing opportunities in the NAFO RA and NEAFC RA. Northern prawn constitutes the largest part of the landed quantities of the distant water fishing fleet - 62% (9174 t out of 14 893 t). Overall, 99.9% of RED 3LN, 63.3% of RED 3M, 99.8% of COD 3M, 100% of GHL 3LMNO, 2.9% of SKA 3LNO, 98.8% of WIT 3NO, 0% of SQI 3 and 4, and 0% of PRA 3M fishing days Estonia's year 2020 quotas (final quota after quota swaps with other states) in NAFO RA were exhausted.

Table 4. The comparison between total landed quantities (both regulated and non-regulated species) and the amount of Estonia's own initial fishing opportunities (excluding swaps) in distant water fleet segment in year 2020. * fishing days

Fishing Area	Estonia's initial fishing	Total landings (t)

	opportunities (t)	
NAFO	3364	3170,286
NAFO PRA 3M	391*	
NEAFC	308	11722,786
Svalbard PRA	377*	

The evolution of Estonia's fishing opportunities is shown below. As can be seen from chart 3, RED 3LN and GHL 3LMNO quotas were increased in 2020, also, 2020 was the first year after 9 years when it was possible to allow fishing for PRA 3M. COD 3M quota was reduced by more than half in 2020. Other quotas remained at the same level as in 2019. In NEAFC, most of the quotas remained the same as in 2019, except Mackerel quota that increased compared to 2020.

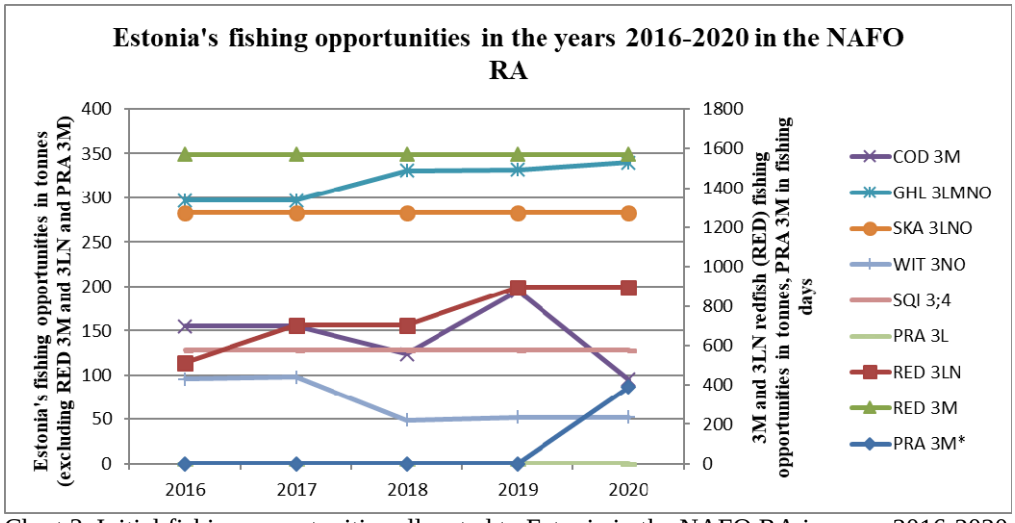

Chart 3. Initial fishing opportunities allocated to Estonia in the NAFO RA in years 2016-2020. * fishing days.

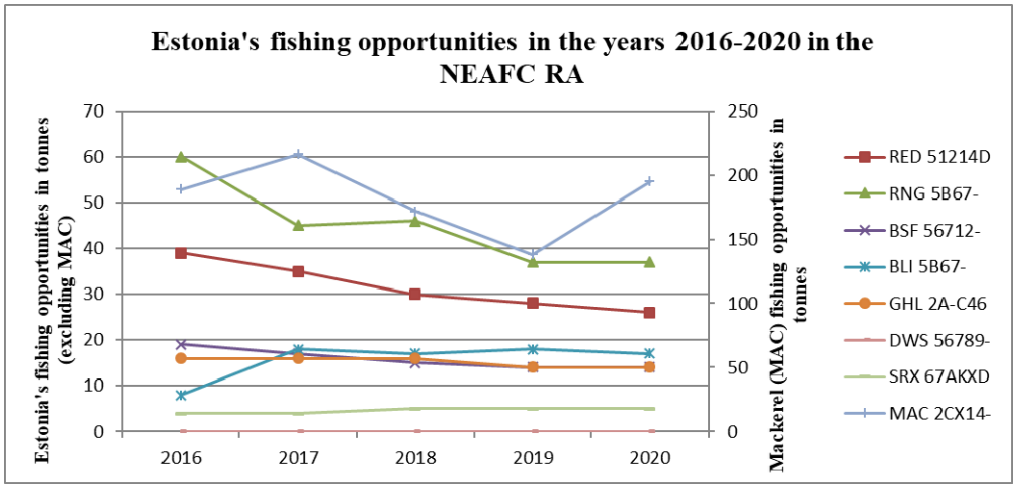

Chart 4. Initial fishing opportunities allocated to Estonia in the NEAFC RA in years 2016-2020.

Over the period of last five years (2016-2020) the main changes in landed species' composition has been the increasing importance of combined fisheries in the Barents Sea. Northern prawn is the most important species in catch volume making on average 53% of all fleet segment VL 40XX catches in last five years (2016-2020). Althought catches of Northern prawn in the Barents Sea decreased slightly in 2020 compared to 2019, then catches of Northern prawn increased in the Svalbard area. In addition, Northern prawn was caught in the East-Greenland waters in 2020 (477 tonnes). Total landed quantity decreased in 2020 by almost 3000 tonnes compared to 2019. The main reason was that out of two vessels active in

NAFO RA, one was out of order for most of the 2020. Landed quantities of the main species during 2016-2020 is shown below in chart 5.

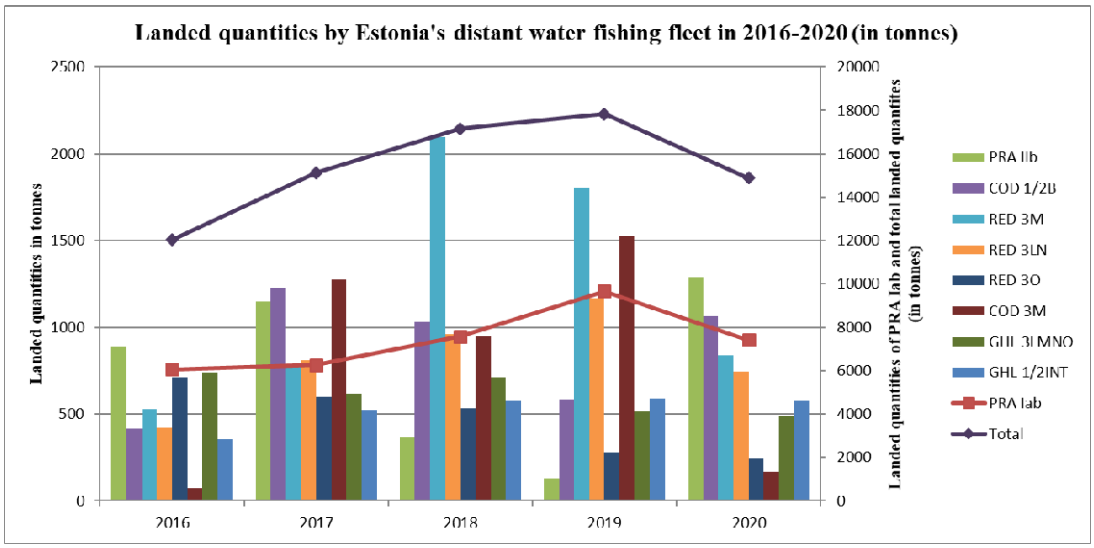

Chart 5. Landed quantities by Estonia's distant water fishing fleet (VL 40XX) in 2016-2020, in tonnes. Only the most important stocks are shown together with the total landed quantity.

Developments in fleet

By the end of 2020, there were 1 898 vessels in the Estonian marine fishing fleet. The total number of vessels increased compared to 2019 because of entries of new vessels into length class VL0010. Two vessels were added into segment VL40XX. All other segments saw a reduction of the number of vessels or the number of vessels remained the same.

The development of the fleet in last 17 years since joining the EU in May 1, 2004, together with the level of Estonia's fleet ceiling, is given below in charts 6 to 8. Although the number of vessels has increased over the period of 2004-2020, the total gross tonnage and engine power have decreased considerably due to the exit of larger trawling vessels from the fleet and replacing them with small coastal fishing vessels with length under 10 m and using passive gears. By length classes, the number of vessels has decreased in all length classes except in length class VL0010. As can be seen from the charts 6 to 8 below, the most stable vessel length class over the 17-year period have been VL1012, where only minor changes have occurred by all three characteristics. Sharpest decline in the number of vessels, engine power and gross tonnage have taken place in the Baltic Sea trawling fleet length classes VL1218 and VL2440 and also in the distant water fleet VL40XX. The main drivers behind the decline in those length classes have been both economic and environmental as to better adjust with smaller fishing opportunities and to ensure sector's profitability.

During 2020, 35 vessels (1175 kW, 407 GT) were deleted from the fleet, out of which 3 were from DCF fleet segment TM VL2440 (661 kW, 351 GT), 31 from segment PG VL0010 (470 kW, 49 GT) and one from PG VL1012 (44 kW, 6 GT).

Total of 116 vessels (5274 kW, 2287 GT) entered the fleet in 2020, except four of them, all vessels (112 vessels, 743 kW, 82 GT) entered into DCF fleet segment PG VL0010. Two vessels were registered in DCF fleet segment TM VL2440 (863 kW, 441 GT) and two vessels entered DCF fleet segment VL40XX (3668 kW, 1764 GT).

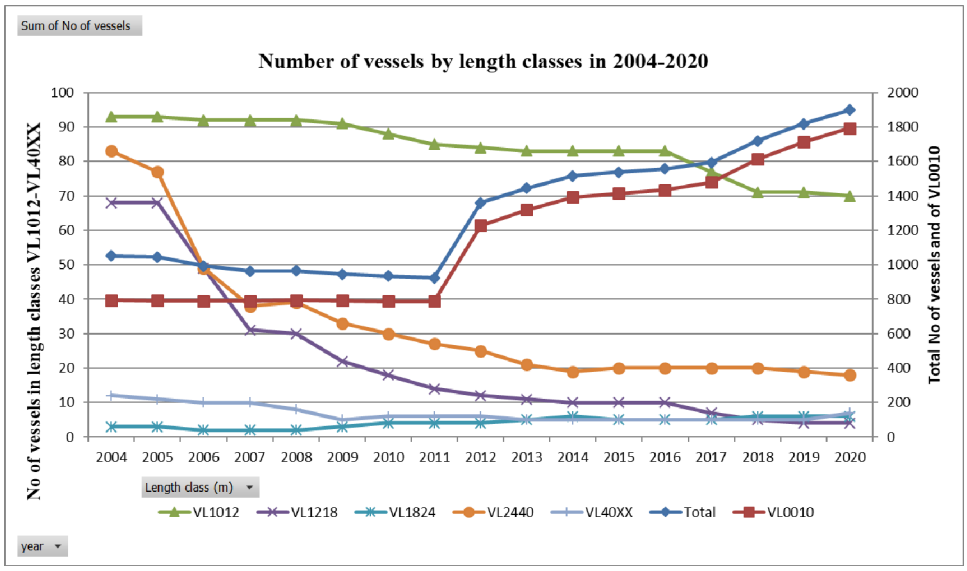

Chart 6. Developments in the number of vessels in Estonian marine fishing fleet by vessel length classes in 2004-2020.

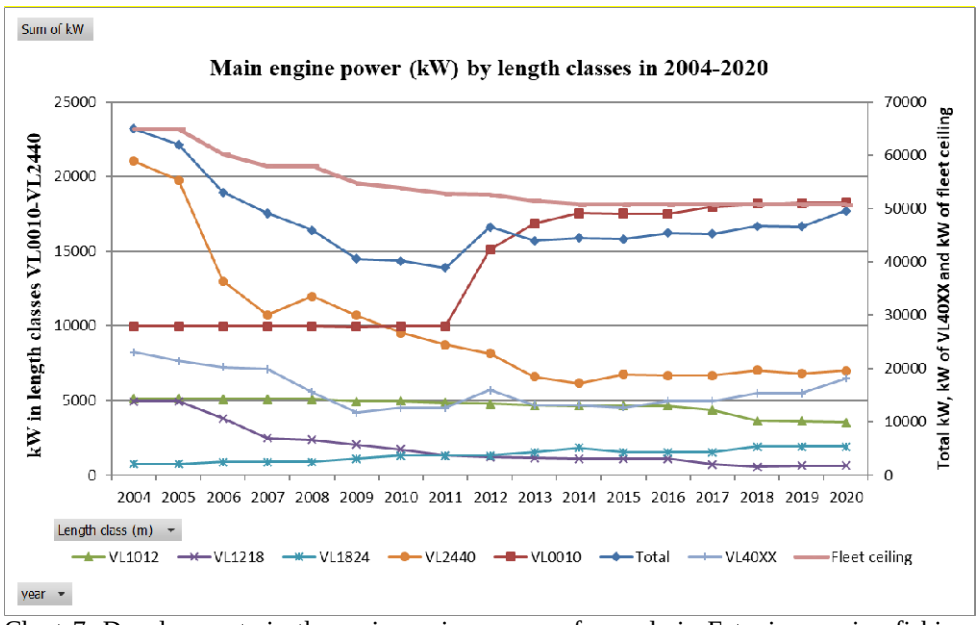

Chart 7. Developments in the main engine power of vessels in Estonian marine fishing fleet by vessel length classes in 2004-2020, together with Estonia's fleet ceiling.

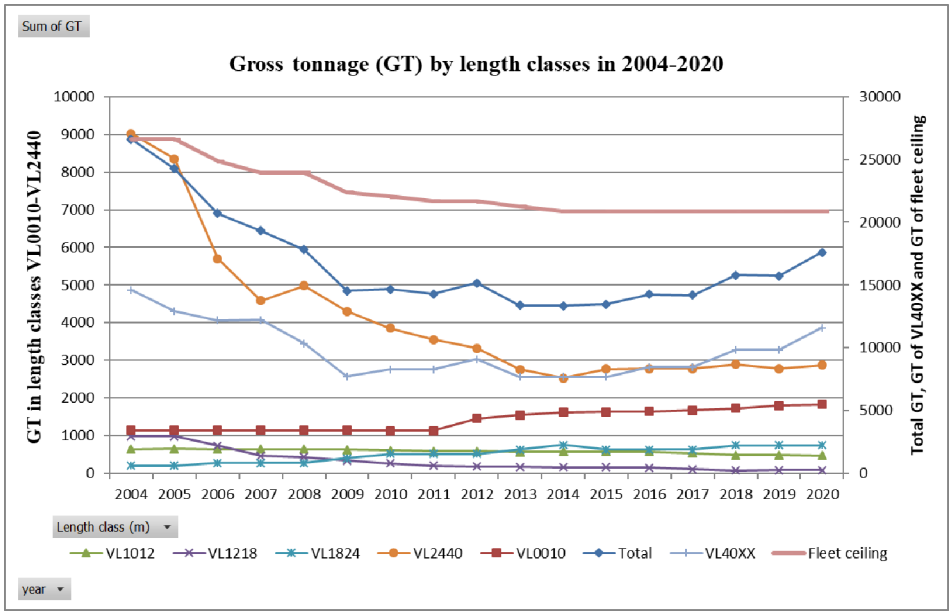

Chart 8. Developments in the gross tonnage of vessels in Estonian marine fishing fleet by vessel length classes in 2004-2020, together with Estonia's fleet ceiling.

Section B

Effort reduction schemes and impact on fishing capacity of effort reduction schemes

Estonia adheres to numerous effort control and reduction schemes established by legal acts of national, EU or RFMO level. Different seasonal/spatial fishing restrictions apply, as well establishing yearly list of vessels allowed to fish in the Gulf of Riga. Every year, temporary fishing restrictions for the effort reduction are enforced in the Baltic Sea coastal and trawl fisheries to ensure sustainable use of fishery resources. In Svalbard fishing area, the number of shrimp fishing days and the number of vessels that may fish at the same time in the area, are limited.

National fishing capacity reduction schemes have been used in earlier periods for reducing fishing capacity and consequently fishing effort. Between 2006 and 2014, total of 61* (14 146 kW and 5909 GT) vessels were removed from Estonia's fishing fleet with public aid. Most of them, 60 vessels, were removed from the Baltic Sea trawling fleet, out of which 16 belonged into length class VL1218 and 44 into length class VL2440. No vessels were removed with public aid from the length class VL1824. One vessel was removed from the distant water fleet VL40XX. Effort reduction schemes did not include coastal fleet segments, length classes VL0010 and VL1012, as fishing in coastal fishery is regulated by ITE system.

Taking into account the long-term dynamics of the relevant fish stocks, no further decommissioning schemes are foreseen in Estonia as fishing capacity has generally reached the targets set by National Fishing Effort Adjustment Plans and there is no structural overcapacity.

*

In 2020, one fishing vessel from fleet segment VL40XX, which was removed from the fleet with public aid in 2013, was reentered into the fleet. This was done after consulting with the European Commission (Ares(2018)3941009-25/07/2018) and after the recovery of public aid with interest. Thus, also the capacity withdrawn in 2013 was reintroduced. This reintroduction was possible only because Estonia's distant water fishing fleet (VL40XX) is economically viable, existing vessels' utilisation rate is rather high and most of the targeted species are managed sustainably.

Section C

Compliance with entry/exit scheme and with level of reference

As in previous years, in 2020, Estonia followed the entry-exit scheme as foreseen under the common fisheries policy. Every entry into the fleet register or increase in tonnage and/or engine power is compensated by the removal of at least equal quantity of capacity from the fleet. The fishing capacity of a vessel deleted from the register with public aid cannot be replaced. Since the accession to the European Union in 2004, Estonia has always been in compliance with the reference levels.

Table 5. Compliance with the entry/exit scheme and with level of reference in year 2020.

	Management of the entry/exit scheme in 2020	**GT**	**kW**

1	**Fleet ceiling on 01/01/2014 according to Annex II of the European Parliament and the Council Regulation (EU) No 1380/2013**	**21 677**	**52 566**
2	Capacity of the fleet on 01/01/2020	15 731	46 631
3	Entries of vessels of more than 100 GT financed with public aid	0	0
4	Other entries or capacity increases (not included in 3 & 5)	2287	7254
5	Increases in tonnage GT for reasons of safety	0	
6	**Total entries (3 + 4 + 5)**	2287	7254
7	Exits financed with public aid*	0	0
8	Other exits (not included in 7)	410	4309
9	**Total exits (7+8)**	410	4309
10	Power of engines replaced with public aid conditional to power reduction		0
11	**Capacity of the fleet on 31/12/2020 (2+6 - 9)**	17 608	49 576
12	**Fleet ceiling on 31/12/2020 ****	**21 314**	**51 850**

* All exits with public aid were finalised in 2014.

** With reference to our 15 June 2016 letter No 6.2-2/996 and 30 June 2016 letter No 3130753 from the Commission, when subtracting the capacity of 4*** vessels removed from the fleet with public aid between 17 October 2013 and 30 December 2013, **the actual fleet ceiling on 31/12/2020 was 20 890 GT and 50 747 kW**.

*** please see the explanation above in Section B about reintroduction of one vessel's capacity that was removed with public aid.

Section D

Summary of weaknesses and strengths of fleet management system and plans for improvements

The main strength of the Estonian fleet management system is the system of transferable fishing concessions in the form of both ITQ and ITE, which allows owner of the fishing rights to decide when to fish or give the right to someone else, thus helping to optimize the use of fishing opportunities and to help to balance fishing opportunities with the fishing capacity. Allocation of quotas based on historical fishing rights gives a certain stability regarding long-term investments. This is also an initiative for the companies to use the optimal number of vessels in order to utilize their fishing possibilities in economically reasonable way. Estonia's Transport Administration has created a new fully digital Vessel Information System (due to go in production June 2021, with the EMFF funding), which reduces administrative burden and application process for companies. The new system will be linked in the coming years (planned for 2022) also with Estonia's fishing fleet register. This will reduce time necessary for data checks and vessel registering application process and allows automatic cross-checks.

General level of compliance with fleet policy instruments

Entry/exit scheme is fully applied and the fleet ceiling set for the Estonian fishing fleet has not been exceeded.

Section E

Changes of the administrative procedures relevant to fleet management

No changes were made in 2020 in administrative procedures relevant to fleet management in Estonia.

Section F

Application of the balance indicators

For the calculation of the balance indicators the Guidelines of the 02.09.2014 document COM(2014) 545 final are used. Where appropriate, a traffic light system for visualising the results is used. Under the DCF, the data on expenditure, income and capital value for distant water fleet segment (length class VL40XX) are not included as the number of active vessels in this length class is too small. Thus, the calculations of economic indicator for the length class VL40XX is not presented in this report and is submitted separately.

For economic data, there is currently one clustered fleet segment, which is formed due to a small number of vessels. TM VL1218, TM VL1824 and TM VL2440 are clustered to form segment TM VL1840. Clustering is possible as vessels in all of these three length classes fish in the same area, for the same species and they use the same gear. In case the data is available, time-period of 5 years is used for calculating the indicators, but different clustering of economic data compared to previous years makes it more difficult to compare years between themselves.

In general, it is important to stress that vessels belonging to the same fishery (i.e. fishing in the same area, for the same species/stocks, using similar gear) should be analysed together as dividing them into smaller subsets (e.g. based on DCF fleet segments) might distort the results, especially in case the number of vessels is very low as is the case with fleet segments TM VL1218 and TM VL1824.

Biological sustainability indicators

The calculation of biological sustainability indicators is based on the latest data available on STECF JRC web-page, report STECF 20-11 - Balance capacity - indicator table.xlsx. Two indicators are given – sustainable harvest indicator – SHI, and stocks at risk indicator – SAR. From this report, SAR is available only for fleet segment PG VL0010, and for the period 2016-2018. SHI is available for all Baltic Sea fleet segments up to year 2018.

Sustainable Harvest Indicator, SHI

According to the Guidelines, SHI > 1 may indicate that fleet segment is relying on a stock of which fishing opportunity is set above MSY if this has occurred in 3 consecutive years.

Table 6. Sustainable Harvest Indicator for each DCF fleet segment in period of 2014-2018 according to the report STECF 20-11.

DCF fleet segment	2014	2015	2016	2017	2018
PG VL0010	0,99	1,37	1,65	1,62	2,03
PG VL1012	0,99	1,37	1,65	1,62	2,03
TM VL1218	1,22	1,40	1,36	1,44	1,55
TM VL1824	1,29	1,43	1,37	1,41	1,52
TM VL2440	1,29	1,43	1,33	1,41	1,54

As can be seen from table 6, all active Baltic Sea fleet segments have values above 1 on a period of 2014-2018. Nevertheless, according to the STECF report 20-11, in segments TM VL1824 and TM VL2440, there seems to be no clear trend. All three Baltic Sea trawling segments (TM VL1218, TM VL1824 and TM VL2440) are deemed to be out of balance according to the STECF report 20-11.

Fleet segment PG VL0010 is based on a small-scale mixed fishery, where the dependence on EU-regulated species in directed fishery is not significant. According to the Annex III of the

STECF 20-11 report, the main stocks on which fleet segment PG VL0010 is reliant on, are European perch, Pike-perch and European smelt – all of which are not regulated on an EU-level. Based on the 2020 landing and first sales data, then by the landed quantity the three most important species were Baltic herring (29% of all VL0010 landings, stock HER 3D-R30 catches made 19% of total landings), European smelt (24%) and European perch (20%). Pike-perch catches made only 0.5%, Atlantic salmon catches 0.3% and cod 0.04%. In first sales prices, however, the most valuable species were European perch (46% of VL0010 total first sale value), European smelt (19%) and Baltic herring (5%, stock HER 3D-R30 value made 4% of VL0010 total). The first sale value of pike-perch catches was only 2%, value of Atlantic salmon 2% and value of cod 0.1%.

Fleet segment PG VL1012 depends on HER 03D-RG stock. According to the latest ICES advice in May 2020, the TAC has been within the F limits set in the Regulation (EU) 2016/1139 and the stock size has been above MSY Btrigger in years 2018-2020. HER 03D-RG has been evaluated as being fished at Fmsy in 2017-2019. At the same time, catches of HER 3D-R30 made only 8% of fleet segment's catches. Thus, the results of SHI for fleet segment PG VL1012 for years 2017 and 2018 depicted in STECF report 20-11 are controversial.

Fleet segments TM VL1218, TM VL1824 and TM VL2440 depend mostly on two stocks – SPR 3BCD-C and HER 3D-R30, and also on HER 03D-RG stock, which was described in previous paragraph. According to the latest ICES advice in May 2020, for both stocks, fishing pressure has been above the Fmsy in years 2017-2019. Stock size has been above MSY Btrigger for Sprat in all years (2018-2020), but below trigger in 2020 for Baltic herring.

In the Baltic Sea, the sustainable management of stocks is foreseen with the Regulation (EU) 2016/1139 of the European Parliament and of the Council of 6 July 2016 establishing a multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and the fisheries exploiting those stocks, amending Council Regulation (EC) No 2187/2005 and repealing Council Regulation (EC) No 1098/2007).

According to the guidelines, in case of SHI, if more than 60 % of the value of the catch is made up of stocks for which values of F and Fmsy are unavailable the indicator is deemed to be unavailable. In such case, Member States should use available assessment information about one or more species that for reasons of historical abundance or consistency could be considered as indicators of the impact of fishing on an ecosystem.

Primary stocks harvested by vessels belonging to segment VL40XX during 2020 were Northern prawn (PRA) and Atlantic cod (COD) in the Northeast Atlantic and redfish (RED) in 3M and 3LN and Greenland halibut (GHL) in 3LMNO in the NAFO RA.

Concerning Northern prawn in the ICES Subareas I and II, the stock has always been exploited far below F_{msy} and estimates of stock biomass have remained above MSYbtrigger according to the year 2020 advice from the ICES (Source: pra.27.1-2 (ices.dk)). The same is valid for also Cod in subareas 1 and 2 (Northeast Arctic), where according to the 2020 advice fishing pressure has been below F_{msy} in 2017-2019 and stock size above MSYbtrigger throughout 2018-2020 (cod.27.1-2 (ices.dk)).

According to the recent scientific advice for NAFO stocks (Source: https://www.nafo.int/Science/Science-Advice/Stock-advice), for RED 3M stock, the stock abundance and recruitment are declining. RED 3M TAC has remained the same over the period. For RED 3LN, a harvest control rule applies. The TAC for RED 3LN remained the same in 2020 as in 2019, which was higher than in previous two years (2017-2018).

Concerning GHL 3LMNO, new Management Strategy was adopted in 2017 and it will be in force from 2018-2023. GHL 3LMNO TAC increased slightly in 2020 compared to 2019.

Stocks-at-risk indicator, SAR

The Stocks-at-risk (SAR) indicator should give an indication whether a fleet or a fleet segment catches stocks that are considered to be at risk. In that assessment, only stocks at risk that make up for more than 10% of the segment's landed quantities, or from which the segment takes more than 10%, are taken into account. SAR data was taken from the STECF report 20-11, where regrettably SAR information was available only for fleet segment VL0010. Segment PG VL0010 is considered to be out of balance in years 2016-2018. According to the Annex III of the STECF 20-11 report, stock at risk for fleet segment VL0010 is Atlantic salmon 3D32, which is a result of a fact that 100% of this stock is received as by-catch by vessels in fleet segment VL0010.

Economic indicators

Economic indicators are calculated for the period of 2015-2019 and taken as basis in this report as the data for 2020 is not yet available. Two indicators are calculated: return on investment (ROI) showing long-term viability of the fleet and ratio between current revenue and break-even revenue (CD/BER) showing short-term viability. For the calculation of ROI indicator, an interest rate of a low risk long term investment has been calculated based on the five-year arithmetic average of Lithuanian and Latvian low risk long-term investment interest rates according to the European Central Bank as no harmonised long-term interest rate is available for Estonia. According to the information on European Central Bank web-page, the data is available for Estonia only as of June 2020 (Long-term interest rate statistics for EU Member States (europa.eu)).

Return on investment, ROI

As mentioned above, the data on ROI in various fleet segments was calculated nationally based on DCF data as the data for 2019 was not available in STECF report 20-11. Table 7 shows, using a traffic light system, the values of ROI in three Baltic Sea segments. As can be seen from the table, fleet segments PG VL0010 and PG VL1012 have shown in recent years (2018-2019) negative economic results. Although ROI value in fleet segment TM VL2440 (TM VL1840 as of 2019) has been low for the whole period under preview, it has been always positive and in recent years shows increasing trend.

Concerning all Baltic Sea trawling segments – TM VL1218, TM VL1824 and TM VL2440 - it is important to note that most of the fish landed by trawlers is owned by producer organisations in charge of the whole chain from catch to processing to exports, therefore their profits are generated at the export stage and not at the moment of landing (and first sales).

Table 7. Values of ROI in length classes VL0010, VL1012 and VL1840 in years 2015-2019. According to the Guidelines, green values indicate that extraordinary profits are being generated, orange values indicate possible lack of long-term viability and red indicate possible economic over-capitalisation. * Prior to 2019, VL1824 and VL2440 were clustered together, as of 2019, vessels of length classes VL1218, VL1824 and VL2440 have been clustered together to form a segment TM VL1840.

Segment	Year	2015	2016	2017	2018	2019
PG VL0010	**ROI**	2,88	9,34	8,39	-3,45	-11,27
PG VL1012	**ROI**	16,49	9,2	11,19	-6,53	0,32
TM VL2440	**ROI**	1,9	3,5	2,26	8,34	
TM VL1840	**ROI**					5,61
5 year average low risk long term interest rate of LTU and LVA		**4,88**	**3,53**	**1,74**	**1,14**	**0,68**

Ratio between current revenue and break-even revenue, CR/BER

The data on CR/BER was calculated based on national DCF data as data in STECF report 20-11 is only available up to 2018. For the calculation of CR/BER, opportunity cost of capital is excluded from the calculation, therefore, the indicator shows only the short-term viability of the Baltic Sea fishing fleets. According to the Guidelines, ratio greater than 1 indicates that in short-term the income is sufficient for covering variable and fixed costs, indicating that the segment is profitable. Ratio below 1 can indicate that insufficient income is generated to cover variable and fixed costs. Negative ratio means that variable costs exceed current revenue, indicating that the more revenue is generated, the greater the losses will be.

As can be seen from the chart 9 below, during the period of 2015-2019, only once (in PG VL0010 in 2019) has the ratio been negative and twice between 1 and 0 (PG VL0010 and PG VL1012 in 2018). Ratio for Baltic Sea trawling fleets has been above 1 in all years and is showing stable or slightly increasing trend. Also, PG VL1012 was again above 1 in 2019, after being below 1 once, in 2018.

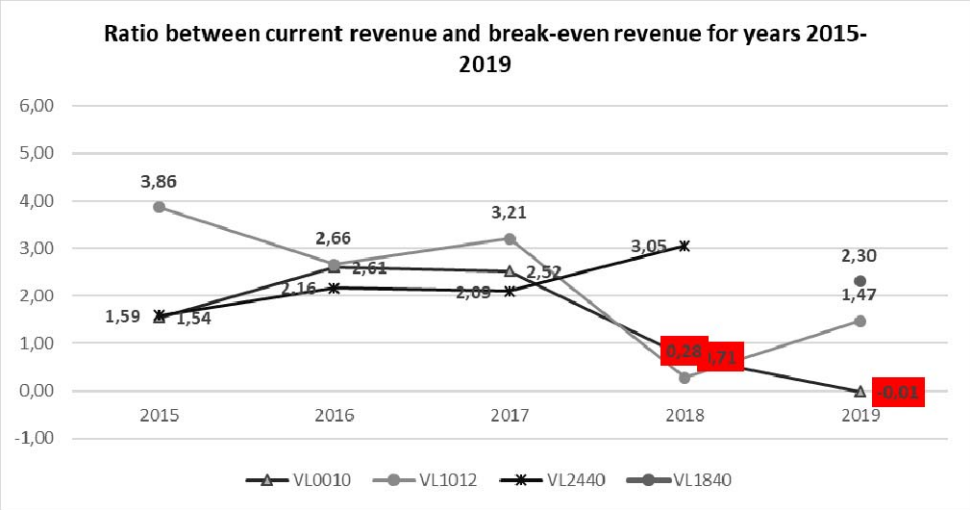

Chart 9. Ratio between current revenue and break-even revenue for years 2015-2019.

<u>Vessel use indicators</u>

Vessel use indicators have been calculated for years 2015-2020. The proportion of inactive vessels has been calculated for length classes VL1218-VL40XX only, as in coastal fisheries (VL0010 and VL1012) different vessels are used depending on the season, directed species and fishing gear used. For example, Baltic herring is targeted by coastal fisheries during a relatively short spring season and some of those vessels are not used in other fisheries throughout the year. Also, often vessel owners have several same type vessels just in case the main one in use will be out of order, then it is possible to quickly get a replacement vessel in use. In addition, fishing in coastal fisheries is an important way to diversify economic activities in peripheral areas and is not always the main economic activity for fishers. Therefore, it is not reasonable to calculate the proportion of inactive vessels in coastal fleet segments PG VL0010 and PG VL1012. For the same reasons, the results of the calculation of vessel use indicator in fleet segments PG VL0010 and PG VL1012 should be taken with caution. Moreover, vessel use indicator does not serve its purpose because in coastal fisheries fishing effort is limited by ITE – amount and type of fishing gears allowed to use by a licence owner.

Inactive Fleet Indicator

The number of active fishing vessels in length classes VL1218-VL2440 declined by one – 27 active vessels in 2020 compared to 28 in 2019. According to the Guidelines, it is considered normal that 10 % or less of the vessels in a fleet segment are inactive. There were 3 inactive vessels over the course of 2020. All three inactive vessels belong to segment TM VL1218.
The number of active vessels in length class VL40XX increased in 2020. In 2020 there were 6 active vessels in VL40XX and one inactive vessel.

Vessel Utilisation Indicator

For calculation of vessel utilisation indicator, only active vessels, which have had at least one day at sea during a year, are included. For data comparability reasons an observed maximum activity level was chosen for calculations instead of theoretical (220 days at sea). An observed maximum days at sea for each fleet segment has been taken for the basis mostly because theoretical 220 days at sea is not fully applicable in the Baltic Sea fishery. In the Baltic Sea trawling fishery, and to some extent also in coastal fishery, fishing is very seasonal. Usually, the spring fishing season for trawlers ends in April or May, depending on the water temperature. Fishing starts again in August or September, when water is again cool enough. During summer, too warm water affects fish quality, therefore it is not reasonable to fish during summer period. In addition, during autumn-winter, ice conditions or stormy weather can considerably affect vessels' ability to catch. For example, first quarter of 2020 was very stormy and there were many days when vessels were not able to go out to the sea. This affected considerably first quarter's catch levels.

The ratio between the average effort per vessel in a fleet segment and the observed maximum effort actually exerted by a vessel in kWdays was calculated in length classes VL1218, VL1824, VL2440 and VL40XX.

Table 8 shows that the number of average fishing days has fluctuated in all fleet segments. All values (Min, Max and Average) declined in fleet segments TM VL1824 and TM VL2440. As explained above, it was greatly affected by the unfavourable weather conditions at the first quarter of the 2020. To some extent this was also caused by COVID-19 and lower fishing quotas for Sprat and Baltic herring. Vessel use has been the most homogenous in length class VL40XX in all surveyed years. Also, minimum, maximum and average days at sea is the highest in length class VL40XX. The average of VL40XX and the minimum days at sea was lower in 2020 mostly because of one vessel's technical problems, which prevented the vessel from fishing for the most of 2020.

Table 8. Minimum, maximum and average days at sea in fleet segments TM VL1218, TM VL1824, TM VL2440 and VL40XX in years 2015-2020.

	VL1218			**VL1824**			**VL2440**			**VL40XX**		
Year	**Min**	**Max**	**Average**	**Min**	**Max**	**Average**	**Min**	**Max**	**Average**	**Min**	**Max**	**Average**
2015	1	103	47,5	35	151	123,5	5	179	129,6	292	348	323
2016	7	74	37	89	147	119	86	152	112	166	331	274
2017	2	117	34,4	119	161	146,8	56	173	132,6	218	329	279
2018	1	15	6	45	170	136	57	178	137	253	316	284
2019	1	37	13	21	165	135,5	75	172	129	264	347	284
2020	64	64	64	17	146	117	17	155	120	133	365	263

The calculation of ratio between the average effort and the observed maximum effort in kWdays for different fleet segments in the period of 2015-2020 is shown in table 9 below. The Guidelines suggest that ratio below 0.7 should be considered as showing structural overcapacity. The ratio of fleet segment VL1218 has been below 0.7 for the whole period, except 2020. High 2020 ratio's cause is that there was only one active vessel in that fleet segment. The ratios of two length classes – VL40XX and VL1824 - have been over 0.8 the

whole period, except in 2020 for VL40XX (ratio 0.72), which can be explained by one vessel's technical problems and short fishing season as a result. Also, the ratio has been stable and over 0.7 for the last six years in length class VL2440. This means that these three fleet segments are stable and fishing opportunities are used rather efficiently.

Table 9. Vessel Utilisation Indicator (ratio in kWdays) for years 2015-2020. Red colour (below 0.7) indicates that there may be a substantial under-utilisation. Green colour (above 0.9) may refer to largely homogenous level of activity in the fleet segment according to the Guidelines.

kWdays_Ratio	2015	2016	2017	2018	2019	2020
VL1218	0,46	0,5	0,29	0,38	0,35	1
VL1824	0,82	0,81	0,91	0,8	0,82	0,8
VL2440	0,72	0,74	0,77	0,78	0,75	0,77
VL40XX	0,93	0,83	0,85	0,9	0,82	0,72

For fleet segments PG VL0010 and PG VL1012, the vessel use indicator is given in GTdays (table 10). The indicator is low in those segments as fishing is often not the only economic activity, vessels are often used only for a specific fishing operation or fishing gear and in general fishing is very seasonal and dependent on weather conditions. In case of segment PG VL1012, the main target species is Baltic herring, which is harvested mostly on a relatively short period in spring (April and May). Also, fishing in shallow waters can be done without a vessel and fishing in the winter time is generally made without a vessel due to the ice coverage. Thus the time a fishing boat is actually needed, is rather short. Large heterogeneity of the vessel use in the segment has a considerable impact on the vessel use ratio especially in PG VL0010. This has been stressed also by STECF (STECF-13-28) that a low vessel utilisation rate for smaller vessels would be expected.

Table 10. Vessel use indicator in GTdays for segments PG VL0010 and PG VL1012 in 2015-2020.

DCF fleet segment	2015	2016	2017	2018	2019	2020
PG VL0010	0.19	0.24	0.27	0.33	0.2	0.16
PG VL1012	0.57	0.48	0.46	0.44	0.46	0.36