**Swedish Agency for Marine
and Water Management**

2022-05-31   Doc. No 01983-2022

Report on the balance between fishing capacity and fishing opportunities in the Swedish fishing fleet in 2021

Introduction

Under Article 22 of Regulation (EC) No 1380/2013, EU Member States are required to report annually on the balance between the fishing capacity and fishing opportunities of their fleets. Article 22 specifies the type of information and the indicators that should be included in the report, and the technical, biological and economic indicators are set out in more detail in supplementary guidelines (COM (2014) 545). An overall assessment should be made, taking all the indicators into account, to determine whether a fleet segment is in imbalance. The data presented in this report is broken down in accordance with Regulation (EC) No 1004/2017, the Data Collection Framework Regulation.

Breakdown and presentation of the data

For the purpose of the economic and technical indicators the Swedish fleet is not broken down by specific gears; rather, the indicators are presented for six segments broken down by active/passive gear and by length group. This is because there are too few of vessels in several vessel groups for a more detailed breakdown to be used with respect to the economic and technical indicators. Rules on the confidentiality of economic data preclude the presentation of data based on only a few vessels. Table 1 below shows the number of vessels in each segment if a more detailed breakdown had been used. As can be seen from the table, in several segments there are very few vessels.

Although the technical indicators could be presented at a more detailed level, this would mean that they would not be directly comparable with the economic indicators. Moreover, in view of the very small number of vessels in some segments, it would not be statistically meaningful to present technical indicators separately for all 22 segments. Therefore, we have chosen to present the economic indicators, i.e. 'return on fixed tangible assets' and 'current revenue / break-even revenue', as well as the technical 'vessel use' indicator', for six clusters based on active/passive gear and length groups.

The biological indicators are calculated jointly for all Member States on behalf of the Commission on the basis of specific gears, meaning that they are based on very few vessels in the case of some Swedish segments. The economic/technical indicators and the biological indicators are therefore not directly comparable, as noted in STECF 20-11 (p. 186) and STECF 21-16 (p. 170). Thus, as explained above and illustrated in Table 1, we have used a less detailed breakdown, based on active/passive gears and length groups, for the economic/technical indicators in view of the small number of vessels in several segments and the confidentiality rules for economic data.

Table 1. Fleet segments for which data are collected (22 segments) and clusters used in the reporting (6 segments/clusters), 2020.

Existing gear and length classes in the Swedish fishing fleet	DTS (active gear)				DFN (passive gear)	
	VL0012	VL1218	VL1824	VL2440	VL0010	VL1012
DFN						
VL0010					192	
VL1012						60
VL1218						4
DTS						
VL0010	18					
VL1012	48					
VL1218		66				
VL1824			33			
VL2440				12		
FPO						
VL0010					280	
VL1012						36
VL1218						1
HOK						
VL0010					15	
VL1012						1
PGO						
VL0010					6	
PGP						
VL0010					18	
VL1012						1
PS						
VL1218		1				
TM						
VL1012	4					
VL1218		1				
VL1824			2			
VL2440				8		
VL40XX				9		
Total number of vessels per reported cluster	70	68	35	29	511	103

Description of the Swedish fleet

Table 2 gives an overview of how the Swedish fishing fleet developed from 2013 to 2021. The number of vessels decreased by 25% over this period. In 2021 there were 1 019 vessels, of which 818 were actively engaged in fishing. Inactive vessels are vessels that had no fishing activity at any time during the year.

Total tonnage decreased by some 1 700 GT (approx. 5.5%) between 2013 and 2021, and engine power dropped by some 27 400 kW (approx. 15.7%). However, both engine power and gross tonnage increased slightly from 2020 to 2021 because some vessels did not have their fishing permits renewed in 2020 (for example, because of vessel conversion) and were therefore not included in the 2020 statistics.

Table 2. Swedish fishing fleet 2013-2021

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Number of vessels	1 354	1 328	1 298	1 253	1 207	1 175	1 136	1 041	1 019
of which inactive vessels	336	308	296	281	298	288	279	225	201
Proportion of inactive vessels	0.25	0.23	0.23	0.22	0.25	0.25	0.25	0.22	0.20
Average vessel age (years), active vessels	31.6	32.5	33.1	34.0	34.3	34.9	35.5	35.7	36.1
Average length, active vessels	10.6	10.4	10.4	10.3	10.3	10.3	10.4	10.3	10.3
Tonnage (1 000 GT), all vessels	30.7	31.4	30.8	31.9	28.2	28.0	27.8	27.3	29.0
Engine power (1 000 kW), all vessels	174.5	171.1	167.9	170.6	159.2	153.6	153.2	144.1	147.1

Figures 1-3 below and Table B1 of the Annex show overall trends as regards the number of vessels, gross tonnage and engine power, by segment of the fleet. As can be seen from Figure 1, the 'passive gear < 10m' segment is the largest in terms of the number of vessels, whereas the 'active gear ≥ 24 m' segment is the largest in terms of gross tonnage and engine power.

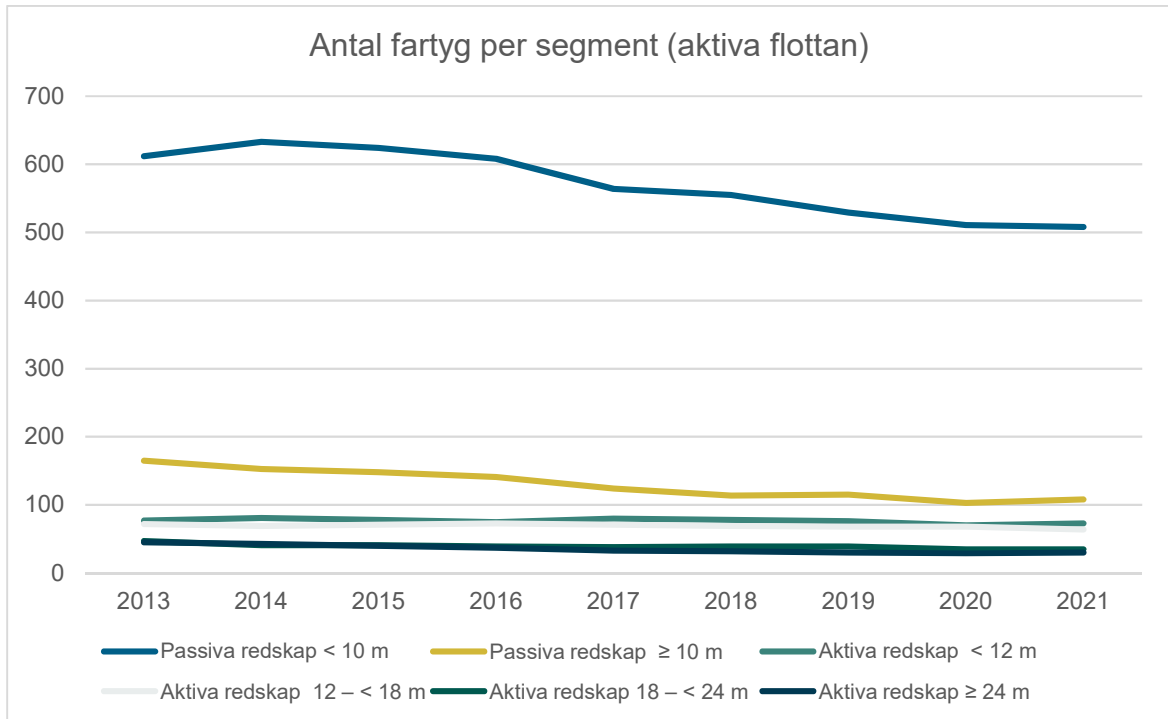**Figure 1.** Number of vessels per segment (active fleet), 2013-2021.

Antal fartyg per segment (aktiva flottan)

Legend:
- Passiva redskap < 10 m
- Passiva redskap ≥ 10 m
- Aktiva redskap < 12 m
- Aktiva redskap 12 – < 18 m
- Aktiva redskap 18 – < 24 m
- Aktiva redskap ≥ 24 m

Figure 2. Gross tonnage per segment (active fleet), 2013-2021.

Bruttodräktighet per segment, BT
(aktiva flottan)

Legend:
- Passiva redskap < 10 m
- Passiva redskap ≥ 10 m
- Aktiva redskap < 12 m
- Aktiva redskap 12 – < 18 m
- Aktiva redskap 18 – < 24 m
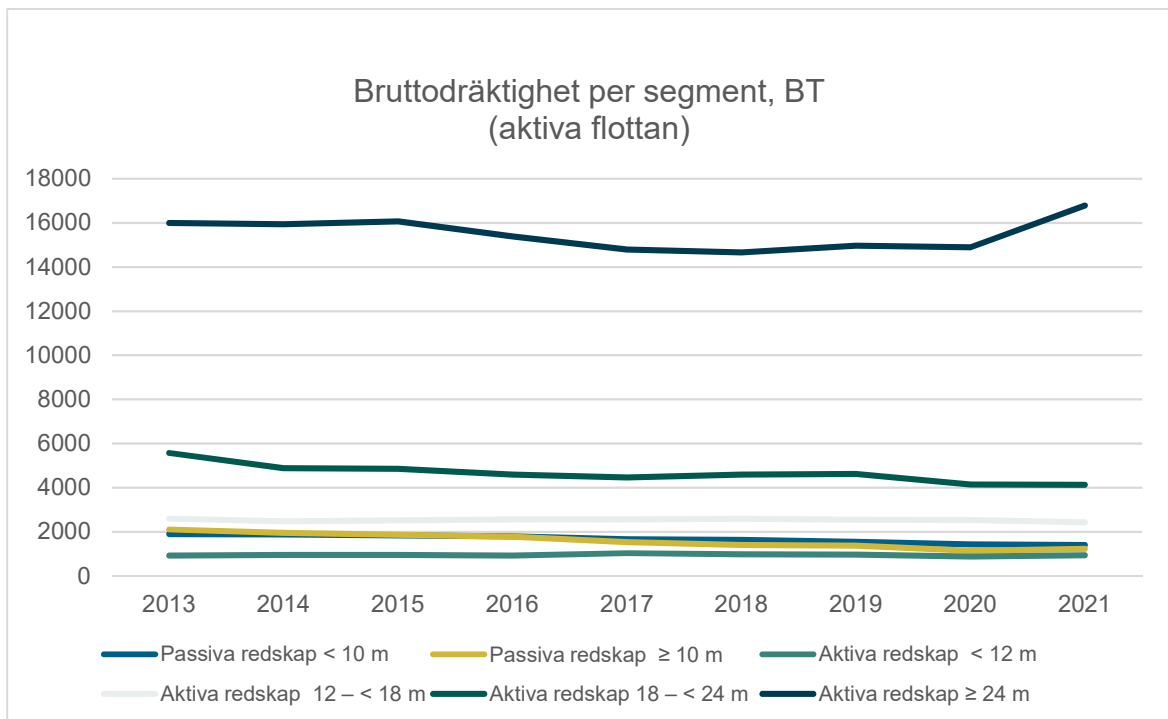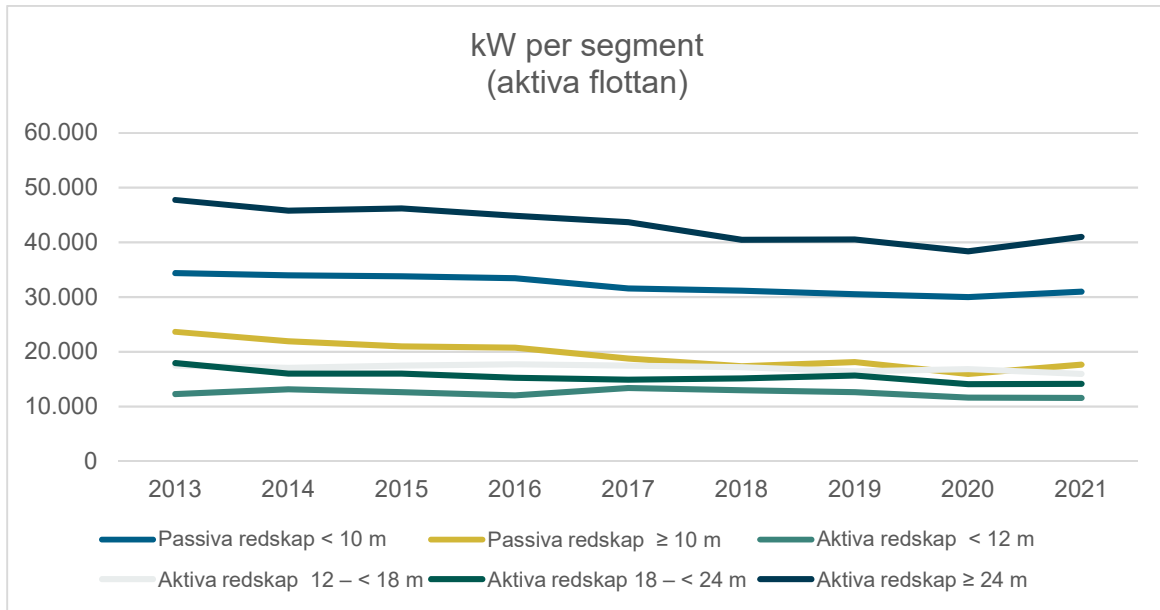- Aktiva redskap ≥ 24 m

Figure 3. Engine power in kW per segment (active fleet), 2013-2021.

Figures 4 and 5 below and Table B2 of the Annex show overall trends in landed weight and landed value by segment in the period from 2013 to 2021. In 2020 the total weight landed by the Swedish fleet was 153 327 000 tonnes [*sic*], with a landed value of €117 105 million [*sic*]*. The total weight and value of landings vary over the years, for example, due to variations in the size of quotas, in particular as regards pelagic quotas as these make up the majority of landings. Moreover, it is worth noting that vessels fishing with active gears account for the majority of both the landed value and the landed weight. In the period from 2013 to 2021, vessels fishing with active gears annually accounted for 97-99% of total catches by weight and 81-86% of the total value of catches. Vessels fishing with passive gears thus accounted for 1-3% of total catches by weight and 14-19% of total value of catches.

* Translator's note: Unless Sweden's catches have multiplied in just 1 year, it is likely that they mean 153 327 tonnes and €11.715 million, based on a report found online which says that total catches in landed weight were some 156 000 tonnes and landed value SEK 836 million in 2021 (https://www.scb.se/contentassets/0da12e6fae0d46c6979ca83d170ce509/jo1101_2020a01_sm_jo55sm2101.pdf).

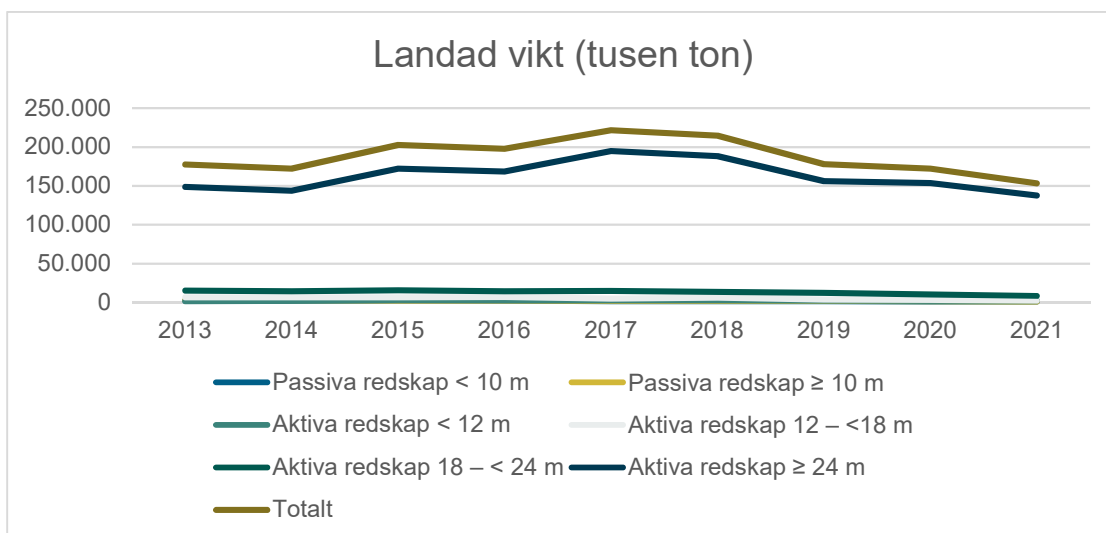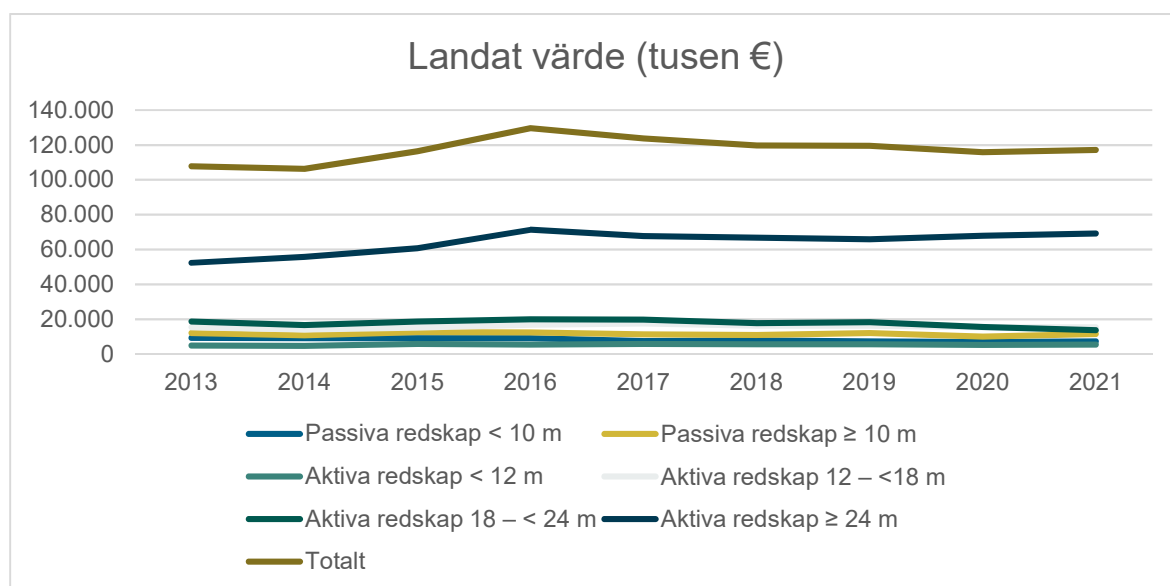**Figure 4.** Landed weight by segment (active fleet), 2013-2021.

Figure 5. Landed value by segment (active fleet), 2013-2021.

Impact on fishing capacity

Fishing permit for Baltic cod

A special fishing permit is required for Baltic Sea vessels of more than 8 metres in length equipped with cod-fishing gear (trawl or passive gear). Separate permits for fishing with such gear in the western and the eastern Baltic were introduced in 2018 (before 2018 there was a single permit for the entire Baltic Sea).

On 23 July 2019 the European Commission adopted a decision to ban commercial cod fishing in Baltic sub-areas 24-26, as an emergency measure to protect the Baltic cod stock. The decision to suspend cod fishing applied from 24 July to 31 December 2019. Similar decisions were adopted by the Council with regard to fishing opportunities for 2020, 2021 and 2022. Fishing with passive gear has, however, been allowed to a limited extent. Permits to use cod-fishing gear in the western and eastern Baltic were issued for 2021 as they also cover gear used to catch species other than cod, but no individual cod quotas were allocated since no targeted cod fishing was allowed in the Baltic Sea.

Permits to use cod-fishing gear in Skagerrak, Kattegat and the North Sea

A special permit is required to fish with cod-fishing gear (including some types of passive gear for vessels longer than 10 metres) in Skagerrak, Kattegat and the North Sea. Applications for new permits are examined on a yearly basis under the system for allocating fishing opportunities annually in place since 2017. Due to the ban on targeted cod fishing in the Baltic, vessels that only had a permit for cod fishing with trawls in the Baltic have had the possibility to apply for a permit to catch crawfish using trawls equipped with species-selective grids in Skagerrak and Kattegat, and a couple of such permits have been issued. As regards the North Sea, no new fishing permits were issued for cod-fishing gear in 2021 due to scientific estimates of catches and taking into account mixed fisheries and by-catches.

Fishing permit for northern prawn

Due to the condition of the northern prawn stock, no new fishing permits were issued for this fishery in 2021. The number of licence holders in this fishery has remained constant at 62 for several years.

Compliance with the fishing capacity entry and exit rules

Fleet entry and exit rules are designed to prevent an increase in fleet capacity and are applied in accordance with EU law. Under these rules, no new capacity can be introduced unless at least the same capacity is first scrapped. Any capacity entering the Swedish fishing fleet in a given year is thus offset by the scrapping of at least the equivalent capacity. Fishing permits are issued on condition that fishing capacity is withdrawn, and only vessels with a fishing permit may be deployed in commercial sea fishing.

The capacity limits for Sweden, as laid down in Annex II to Regulation (EU) No 1380/2013, are 43 386 GT and 210 829 kW. As shown in Table 1, the capacity of the Swedish fleet in 2021 was some 147 100 kW and 29 000 GT. Sweden is thus well below the capacity limits.

Weaknesses and strengths in fleet management

New system of annual individual fishing opportunities in demersal fisheries from 2017

In 2017, to meet the requirements arising from the landing obligation, the Swedish Agency for Marine and Water Management (*Havs- och vattenmyndigheten* - HaV) put in place a system of individual annual fishing opportunities that are transferable between permit holders for periods of time during the year. Individual allocations are, with some exceptions and adjustments, based on reported catches in the 2011-2014 reference period. The system was designed to take into account the particular needs of the smallest coastal vessels fishing unallocated coastal quotas using passive gears. It is expected that a system which gives individual fishers greater flexibility, allowing them to adjust their fishing opportunities in the course of the year, makes them better able to comply with the landing obligation. In 2018 the HaV reviewed the first year of applying the new system. The review showed, among other things, that there was a considerable number of quota transfers already in the first year. At the same time there were frictions in the trading system (e.g. difficulties finding transferees). Other issues linked to the system were also identified. Although the system allows for increased flexibility, quotas may still be restricted at individual level. There is a financial incentive to maximise the value of one's fishing opportunities. This may affect compliance by creating incentives for 'upgrading' catches and discarding unwanted by-catches. Another concern is that as fishing opportunities are allocated on an annual basis, fishers face uncertainty about their fishing opportunities and revenues in the coming years. Various 'lock-in effects' observed in the current system pose a further challenge. In 2020, in a review of the system of individual annual fishing opportunities commissioned by the government, the HaV proposed certain improvements. We consider that transferable fishing rights, with a longer period of validity than has been the case so far, should be introduced also in demersal fisheries. With the right design, and the right balance of regulation and control, we believe that such a system could contribute to a simpler, more transparent allocation system, help make fishing more profitable and make it easier for fishers to adapt their individual fishing opportunities. A simpler and more transparent system could also be more easily adapted to other ecosystem management tools. If the system were to be adapted to allow for longer-term fishing rights, it would need to be designed carefully to prevent undesirable effects. While the HaV does not currently have the legal mandate to implement such a system in

demersal fisheries, we were instructed by the government in January 2022 to analyse the factors that would need be taken into account in such a system.

Pelagic system extended for 10 years

In 2019, the HaV decided to renew the system of transferable fishing rights for pelagic fisheries for another 10 years. The new 10-year period runs from 2020. Since 2009 pelagic quotas have been divided into fishing rights, annual pelagic fishing opportunities, regional fishing opportunities and coastal quotas. Some changes were introduced from 2020, mainly the size of the coastal quotas, with the introduction of transferable fishing rights for herring and sprat in ICES subareas 30-31 (Bothnian Sea and Bothnian Bay) and regional allocation in the same sub-areas.

Changes to administrative procedures

New system for allocating demersal fishing opportunities and associated administrative adjustments

As mentioned above, on 1 January 2017 a new system for allocating fishing opportunities was introduced for Sweden's demersal fisheries. As the new system is based on individual annual fishing opportunities that are transferable between fishers during the year, major adjustments to administrative procedures were required. These included, for example, adjustments of the quota calculation system and introduction of an e-service (*Fiskerätt*) for processing applications to transfer fishing opportunities. In 2019 and 2020, the HaV developed automated calculation of individual allocations.

Ceiling on fishing opportunities

The system of annual, individually allocated fishing opportunities in place since 2017 in demersal fisheries includes certain restrictions on the possibility of transferring fishing opportunities between fishers. For example, there is an upper limit on the quantities of a given species or quota that may be allocated to a single holder of a licence or permit. The aim of these rules is to avoid the concentration of fishing opportunities among a few operators. For example, no licence holder may have fishing opportunities for Norway lobster in Skagerrak/Kattegat exceeding 6% of the total individually allocated quantity of that species.

Balance indicators

Biological indicators

Under the current fleet report guidelines (COM (2014) 545), two biological indicators should be taken into account: the sustainable harvest indicator (SHI) and the stocks-at-risk indicator (SAR). The Commission coordinates the calculation of these indicator values based on DCF data and ICES and STECF assessments. The calculated values are made available to Member States in order to be included in their national fleet reports. SHI and SAR indicator values are currently available up to and including 2019 and are summarised in Table B3 of the Annex.

As explained in the section on the breakdown and presentation of data, the biological indicators are calculated on the basis of a more detailed breakdown (by specific gear type) than the economic and technical indicators, meaning that they are not directly comparable. As already mentioned, a less detailed breakdown is used for the economic and technical indicators because there are too few vessels in several segments, and also to comply with the confidentiality rules for economic data.

Sustainable harvest indicator (SHI)

The SHI reflects 'the extent to which a fleet segment is dependent on overfished stocks'. Here, 'overfished' means that a stock is fished above F_{msy} (the fishing mortality rate corresponding to the maximum sustainable yield). The indicator is a weighted average of the F to F_{msy} ratio, where F is fishing mortality and F_{msy} [*sic*]. This ratio is calculated for the various stocks fished by a segment, for which a single indicator, weighted by the value of landings, is then established. A value below 1 is seen as an indication of sustainable exploitation, whereas a value above 1 is an indication of overfishing. The indicator does not cover all stocks fished, but only those managed on the basis of target levels expressed as fishing mortality (for other species other targets are used).

Of the Swedish fleet segments using active gears, the SHI for 2019 is above 1 for some segments such as purse seiners (PS) and pelagic trawlers (TM), but not for most bottom trawler (DTS) segments, with the exception of 'DTS VL24-40'. Some passive gear segments also had high SHI values in 2019. It should be noted in this regard that segments using passive gear accounted for 1-3% of total catches by weight in the period from 2013 to 2021. In addition to the above, the STECF discusses several uncertainties and shortcomings linked to the SHI in its reports, e.g. STECF 15-02 (pp. 40-41) and STECF 18-14 (pp. 221-223).

Stocks-at-risk indicator (SAR)

A further biological indicator is the indicator for stocks at risk (SAR). This indicator measures how many of the stocks exploited by a fleet segment are biologically vulnerable. According to the guidelines there is potential capacity imbalance if 'stocks at high risk' make up more than 10% of a fleet segment's catches or if the segment takes more than 10% of the total catches of a stock at risk. The calculation method set out in the guidelines will produce an indicator value above 1 if more than 10% of a fleet segment's catches are of a stock at high risk, or if it takes more than 10% of the total catches of that stock. Table B3 provides a comparison of the indicator values for the various segments of the Swedish fleet. It shows that 11 (both active and passive gear) segments have an indicator value of 1 or above. In relation to the SHI the STECF has also highlighted various issues with respect to the SAR indicator in its reports, see e.g. STECF 15-02 (pp. 45-46) and STECF 18-14 (pp. 223-225).

Economic indicators

Return on fixed tangible assets (ROFTA)

The return on fixed tangible assets (ROFTA) indicator is presented in Table 3. The indicator shows the return on investments, and its value should be greater than zero. It should also be compared with – and be higher than – the long-term risk-free interest rate. It is worth noting that labour costs do not include wages for the owner of a one-person business, which leads to undervaluation. At the same time, total revenues include not only the total landed value, but also other revenues such as from the trading in fishing rights, which contributes to overvaluation.

As in previous years, values below 1 are generally found in passive gear segments. All active gear segments achieve a positive return on invested capital (ROFTA).

Table 3. Return on fixed tangible assets (ROFTA), 2013-2020

Value per calendar year (%)	2013	2014	2015	2016	2017	2018	2019	2020
Passive gear < 10 m	-47%	-51%	-48%	-53%	-58%	-51%	-52%	-51%
Passive gear ≥ 10 m	-18%	-13%	-3%	-8%	-13%	-8%	10%	-3%
Active gear < 12 m	14%	2%	9%	31%	8%	18%	34%	6%
Active gear 12 – < 18 m	31%	35%	55%	81%	54%	71%	17%*	83%
Active gear 18 – < 24 m	7%	2%	16%	22%	15%	17%	25%	9%
Active gear ≥ 24 m	32%	7%	21%	63%	42%	23%	24%	15%

* Outliers may occur in some segments because the vessels were allocated to different segments in different years, leading to a variation between years.

Complementary to Table 3, Table 4 shows the total revenue of the various segments in the period from 2013 to 2020.

Table 4. Total revenue, 2013-2020 (thousand €).

	2013	2014	2015	2016	2017	2018	2019	2020
Passive gear < 10 m	9 956	10 059	9 809	9 818	8 039	8 483	7 906	7 567
Passive gear ≥ 10 m	7 510	6 724	7 138	7 414	5 795	5 694	7 491	5 171
Active gear < 12 m	7 068	6 392	7 709	7 325	7 787	6 576	6 878	6 259
Active gear 12 – < 18 m	16 212	14 492	16 377	18 034	16 895	16 835	14 687	15 313
Active gear 18 – < 24 m	20 196	18 033	20 847	21 112	20 704	18 444	19 733	16 709
Active gear ≥ 24 m	70 523	58 695	64 698	74 166	72 427	69 560	69 020	70 898

Current revenue / break-even revenue

The second economic indicator, current revenue divided by break-even revenue, may indicate overcapacity if the value is below 1, as this is an indication that current revenue fail to cover expenses (i.e. fishing is not economically viable). The indicator value is above 1 for active gear segments, but below 1 among passive gear segments, as has generally been the case for years.

Table 5. Current revenue / break-even revenue, 2013-2020.

Value per calendar year (%)	2013	2014	2015	2016	2017	2018	2019	2020
Passive gear < 10 m	-0.4	-0.4	-0.3	-0.4	-0.6	-0.4	-0.3	-0.2
Passive gear ≥ 10 m	0.4	0.6	0.9	0.8	0.6	0.8	1,3*	0.9
Active gear < 12 m	1.5	1.1	1.3	2.0	1.2	1.6	1.9	1.2
Active gear 12 – < 18 m	1.8	1.9	2.4	2.8	2.3	2.8	1,4*	2.4
Active gear 18 – < 24 m	1.2	1.1	1.5	1.6	1.4	1.4	1.7	1.3
Active gear ≥ 24 m	2.1	1.3	1.9	3.0	2.6	1.9	2.0	1.6

* Outliers may occur in some segments because the vessels were allocated to different segments in different years, leading to considerable variation between years.

The economic indicators presented in Tables 3 and 5 appear to indicate some overcapacity in the passive gear segments. It should be borne in mind, however, that these segments account for a very small share of total Swedish catches (1-3%), and that their exploitation of the available fish resources is therefore limited. Moreover, fishers in these segments are often part-time fishers for

whom fishing is not the only source of income. It should also be noted that there are considerable variations within segments.

Vessel use indicators

Proportion of inactive vessels

The proportion of inactive vessels can be considered as unused fleet capacity, i.e. as an indicator of vessel use. The guidelines state that 20% should be seen as a critical threshold. The proportion of inactive vessels in the Swedish fishing fleet was 20% in 2021 for fleet as a whole (see Table 2). In order for the assessment of this indicator to be meaningful, however, it needs to be considered which length groups the inactive vessels belong to. Therefore, Table 6 shows the number of inactive vessels by length (<10 m, 10-12 m and >12 m), and Table 7 shows the proportion of inactive vessels broken down by vessels of less/more than 12 m. As can be seen from Table 6, the majority of inactive vessels are less than 12 m in length. If only vessels of more than 12 m are taken into account, the percentage of inactive vessels was 9% in 2021, i.e. well below the critical level of 20%.

Table 6. Number of inactive vessels by length group, 2013-2021.

Bays	Number of inactive vessels per year								
	2013	2014	2015	2016	2017	2018	2019	2020	2021
<10m	296	263	251	236	252	243	228	182	165
10 - <12 m	29	30	32	30	33	33	33	23	20
≥12m	8	14	10	12	11	11	13	16	13
Total	333	307	293	278	296	287	274	221	198

Table 7. Proportion of inactive vessels broken down by vessels of less/more than 12 m, 2013-2021.

Segment	Proportion of inactive vessels per year								
	2013	2014	2015	2016	2017	2018	2019	2020	2021
<12 m	0.39	0.34	0.34	0.33	0.38	0.37	0.37	0.30	0.27
≥12m	0.04	0.08	0.06	0.07	0.07	0.07	0.09	0.11	0.09

Average days divided by the maximum number of days at sea

A further indicator of vessel use is the ratio of average to maximum days at sea. The maximum number of days at sea can be calculated as a theoretical number, or it can be based on the observed, actual maximum number of days logged at sea. The observed maximum number, based on a percentile of 90%, is presented in Table 8.

According to the guidelines, a value below 0.7 over time is an indication of structural overcapacity. In past years, the indicator values were above the critical threshold for vessels of more than 18 m in length, while values below 0.7 were observed for vessels of less than 18 m. However, since 2019 values below the critical level have been observed also for vessels longer than 18 m. On the other hand, vessels 18-24 m in length fishing with active gears achieved a high 94% in 2021.

The low average values of 2019, 2020 and 2021 could in part be due to the emergency measures adopted by the Commission at the end of July 2019 to ban commercial cod fishing in most of the

Baltic Sea until the end of that year and the ban on targeted cod fishing as from 1 January 2020. This will have meant that segments that comprise cod-fishing vessels had few days at sea in 2019, 2020 and 2021, resulting in a low average number of sea days. This in turn leads to a low indicator value, as was the case for many segments in those 3 years (see Table 8).

This indicator should be assessed with caution as the available quotas, fishing seasons, geographical conditions, the weather and the management system, among other factors, have a strong impact on the potential number of fishing days. As regards the management system, fishers with individual quotas are limited by the quota allocated to them. There is also a wide spread within each segment.

Table 8. Average number of days divided by the maximum number of days at sea (2019-2021).

| Year | Segment | Current effort | | Maximum observed number of days* | Capacity used (share*) |
		Number of vessels	Average number of days at sea		
2021	Passive gear < 10 m	508	56	121	0.46
	Passive gear ≥ 10 m	108	58	153	0.38
	Active gear < 12 m	73	47	106	0.44
	Active gear 12 – < 18 m	64	88	94	0.94
	Active gear 18 – < 24 m	35	119	190	0.63
	Active gear ≥ 24 m	30	128	209.5	0.61
2020	Passive gear < 10 m	511	58	118	0.49
	Passive gear 10 - < 12 m	98	70	169	0.41
	Passive gear ≥ 12 m	5	56	77	0.73
	Active gear < 12 m	70	49	119.5	0.41
	Active gear 12 – < 18 m	68	81	151	0.54
	Active gear 18 – < 24 m	35	123	191	0.64
	Active gear ≥ 24 m	29	143	253	0.56
2019	Passive gear < 10 m	528	59	128	0.46
	Passive gear 10 - < 12 m	104	72	161	0.45
	Passive gear ≥ 12 m	11	49	101	0.48
	Active gear < 12 m	76	48	113	0.42
	Active gear 12 – < 18 m	68	76	159	0.48
	Active gear 18 – < 24 m	39	125	203	0.62
	Active gear ≥ 24 m	30	141	244.5	0.58

* Estimated based on 90% percentile.

Summary and conclusions

Technical, biological and economic indicators are used in this report to assess the balance between fishing capacity and fishing opportunities in the Swedish fishing fleet, as required by the guidelines.

As regards the economic indicators (return on fixed tangible assets and current revenue / break-even revenue), values below critical thresholds can be observed over time for segments consisting of vessels fishing with passive gears. The technical vessel use indicator shows values at critical levels for almost all segments in 2021 (except for vessels of 12-18 m in length fishing with active gears). In recent years this indicator has produced values below the threshold of 0.7 for most segments. This could be partly due to Baltic Sea emergency measures adopted in July 2019 and a ban on targeted cod fishing since 2020. The inactive vessel indicator reached 20% in 2021 (for the fleet as a whole). Among vessels of more than 12 m in length, 9% of vessels were inactive in 2021, well below the 20% threshold.

As already indicated in past fleet reports, we consider that the critical indicator levels for small-scale, passive gear segments should not necessarily be interpreted as overcapacity. These segments are likely to be characterised by part-time fishing, meaning that fishing capacity is not fully exploited but without there being a risk of overfishing. Moreover, these segments account for a very small portion of total catches, with a share of just 1-3% in the period from 2013 to 2021. These aspects have also been highlighted in a number of STECF reports. STECF 18-14 (p. 226) underlines the difficulties of assessing economic and technical indicators for small-scale fleet segments. For example, the economic indicators are based on the assumption that fishing is the main activity, which is often not the case in small-scale fishing.

In 2019 an emergency measure was adopted to suspend cod fishing in the southern Baltic Sea. Targeted cod fishing has been banned since 1 January 2020, for continued protection of the eastern Baltic cod stock, and during various closure periods all fishing was banned in the main cod fishing grounds. The ban on fishing has affected not only vessels that used to fish cod in the Baltic, but also vessels fishing herring in the same areas. The suspension of cod fishing in the Baltic in recent years has put most of the affected cod fishing vessels in a difficult situation. The action plan submitted by Sweden in 2021 noted that vessels which had mainly been targeting cod in the Baltic Sea contribute to overcapacity in the Swedish fleet. The plan proposed measures to curb this fleet capacity, in the form of support for permanent cessation of fishing activities. Based on their fishing activity and the extent to which they were economically dependent on cod fishing, 19 vessels were considered eligible for the proposed measure.

The 2021 action plan also noted that the western Baltic herring quota has been slashed in recent years. In 2021, the entire Swedish quota for western Baltic herring was allocated to small-scale fishing, meaning that no vessels in the system of transferable pelagic fishing rights were allocated any rights under that quota. The impact of this on vessels with pelagic fishing rights is likely to vary according to the composition of their individual fishing rights under different quotas, but most also have fishing rights under other quotas. The economic indicators for the 12 vessels with individual fishing rights for western Baltic herring show that they perform well overall, with some individual variations.

Biological indicators are available up to and including 2019. As regards the sustainable harvesting indicator (SHI), some Swedish fleet segments have a value above 1. High SHI indicator values are found in some passive gear segments, but also in some pelagic trawler and purse seiner segments. One factor to consider when interpreting the SHI is the segment's share of total catches. Moreover, the STECF has noted the following weakness in the interpretation of the SHI (STECF 15-02): '…a SHI value greater than 1 only indicates a fleet's reliance on stocks that are overexploited, not how much they contribute to the overall fishing mortality, which may be of more interest to

managers' (STECF 15-02, p 13). The second biological indicator, stocks at risk (SAR), shows that 11 segments have a value above 1, including both active and passive gear segments.

As noted in STECF 20-11, p. 186, as well as in STECF 21-16, p. 170, and as described in the introduction to this report, a more detailed breakdown is used for the biological indicators than for the economic and technical indicators. This is due to the fact that there are too few vessels in several segments, and to the need to protect the confidentiality of economic data. One possible solution to avoid a segment mismatch in the future would be to calculate the biological indicators at the same level as the economic/technical indicators.

Lastly, it should be noted that the level of breakdown used – in accordance with the data collection framework – will also affect the conclusions drawn. Thus, conclusions as to whether there are imbalances in the various segments depend not only on the indicators used, but also on the way in which the data is broken down. Moreover, the indicators and calculation methods used allow for further interpretation and discussion, which limits the scope for comparison with other Member States.

Annexes: tables

Table B1. Fishing fleet trends, 2013-2021

		2013	2014	2015	2016	2017	2018	2019	2020	2021
Number of vessels per segment, active fleet	Passive gear < 10 m	612	633	624	608	564	555	529	511	508
	Passive gear ≥ 10 m	165	153	148	141	124	114	115	103	108
	Active gear < 12 m	77	81	78	75	80	78	76	70	73
	Active gear 12 – < 18 m	72	69	71	73	71	69	68	68	64
	Active gear 18 – < 24 m	47	41	41	39	38	39	39	35	35
	Active gear ≥ 24 m	45	43	40	37	33	32	30	29	30
Number of vessels per segment, inactive fleet	< 10 m	296	263	251	236	251	243	229	182	165
	10 - < 12 m	30	31	32	30	33	33	35	24	20
	≥12 m	10	14	13	14	13	12	15	19	16
Gross tonnage per segment, active fleet	Passive gear < 10 m	1 899	1 875	1 837	1 787	1 665	1 631	1 551	1 424	1 403
	Passive gear ≥ 10 m	2 103	1 947	1 867	1 780	1 530	1 395	1 373	1 142	1 234
	Active gear < 12 m	916	958	946	916	1 030	983	959	876	940
	Active gear 12 – < 18 m	2 599	2 469	2 515	2 565	2 568	2 589	2 547	2 538	2 432
	Active gear 18 – < 24 m	5 573	4 880	4 860	4 591	4 469	4 597	4 628	4 144	4 133
	Active gear ≥ 24 m	15 995	15 940	16 068	15 390	14 787	14 661	14 969	14 900	16 787
Gross tonnage per segment, inactive fleet	< 10 m	652	574	542	495	555	519	514	443	419
	10 - < 12 m	271	320	301	295	324	347	388	304	210
	≥12 m	695	2 478	1 890	4 038	1 235	1 284	846	1 480	1 472
kW per segment, active fleet	Passive gear < 10 m	34 365	33 956	33 821	33 449	31 582	31 179	30 497	30 017	30 977
	Passive gear ≥ 10 m	23 656	21 936	20 992	20 751	18 750	17 341	18 146	15 961	17 670
	Active gear < 12 m	12 288	13 140	12 629	12 032	13 366	12 957	12 622	11 621	11 561
	Active gear 12 – < 18 m	17 475	17 083	17 471	17 705	17 451	17 200	16 398	16 858	15 956
	Active gear 18 – < 24 m	17 938	16 007	16 025	15 236	14 922	15 143	15 637	14 093	14 123
	Active gear ≥ 24 m	47 769	45 798	46 239	44 883	43 684	40 475	40 562	38 350	41 019
kW per segment, inactive fleet	< 10 m	13 243	11 910	11 231	10 177	11 021	11 087	10 489	7 457	7 300
	10 - < 12 m	4 501	4 087	4 525	4 370	4 176	3 993	4 480	3 767	2 796
	≥12 m	3 279	7 221	4 983	12 020	4 278	4 183	4 323	5 969	5 725

Table B2. Landed weight and value by segment, 2013-2021

	Year	Passive gear < 10 m	Passive gear ≥ 10 m	Active gear < 12 m	Active gear 12 − < 18 m	Active gear 18 − < 24 m	Active gear ≥ 24 m	Total
Landed weight (1 000 t)	2013	2 247	3 151	1 701	6 448	15 423	148 787	177 756
	2014	2 519	2 723	2 250	6 447	14 368	143 807	172 115
	2015	2 447	2 418	3 293	6 737	15 572	172 247	202 715
	2016	2 323	2 672	2 894	7 109	14 439	168 403	197 840
	2017	1 843	1 916	3 074	5 140	14 759	194 896	221 629
	2018	1 710	1 996	2 866	6 368	13 609	188 234	214 782
	2019	1 494	2 029	2 623	3 604	12 335	155 938	178 022
	2020	1 344	1 578	2 252	3 237	10 406	153 492	172 308
	2021	1 173	1 305	2 602	2 236	8 384	137 627	153 327
Landed value (€1 000)	2013	9 278	11 983	4 910	15 325	18 737	52 404	107 726
	2014	9 127	10 808	4 667	14 103	16 620	55 720	106 378
	2015	9 056	12 659	5 860	15 245	18 648	60 773	116 381
	2016	9 133	12 344	5 374	16 924	19 903	71 353	129 658
	2017	7 563	11 246	5 867	17 575	19 702	67 767	123 853
	2018	7 898	10 982	5 544	16 239	17 817	66 820	119 756
	2019	7 204	11 979	5 643	16 236	18 288	65 905	119 612
	2020	7 009	9 978	5 332	15 313	15 534	68 011	115 846
	2021	7 247	11 596	5 501	15 369	13 680	69 213	117 105

Table B3. Biological indicators (available at https://stecf.jrc.ec.europa.eu/reports/balance, STECF 2021-16 – Balance Capacity Indicator Table)

		Total number of vessels												SAR											Status in 2019*	SHI												Trend (5%) 2015/2019	Status in 2019*
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
DFN	VL0010	267	267	239	239	239	238	252	253	258	224	216	203	2	2	2	1	2	1	1	2	2	2	1	in imbalance	2.8	2.3	2.6	2.3	2.1	2.1	2.2	2.5	2.8	2.3	2.2	2.1		
FPO	VL0010	364	372	367	347	326	321	328	312	297	304	290	285	2	2	2	2	2	2	2	2	2	2	2	in imbalance		0.9	0.9	0.7	1.1	0.9	0.6	0.4	0.5	0.5	0.6	0.6		
PGO	VL0010	1	2	1		1		2	1	2	2	4	5	2	1												0.6	0.4		0.6					0.3			-	
PGP	VL0010	30	25	33	32	35	32	34	41	32	21	19	18	0	1	2	0	2	2	0	0	0	0	0	in balance	1.6	0.9	1.0	1.1	1.0	1.0	1.0	0.9	0.8	0.9	0.8	0.7		
HOK	VL0010	31	26	16	20	23	21	17	17	19	13	26	18	1	1	1	1	1	1	1	1	1	1	1	in imbalance	1.7	1.5	2.9	0.9	1.3	1.2	1.1	0.9	1.0	0.9	1.0	0.9		
DFN	VL1012	108	109	98	91	94	100	93	89	84	72	64	62	3	3	3	2	3	2	2	3	3	3	2	in imbalance	3.1	2.7	2.7	2.8	2.7	2.9	2.8	3.0	2.9	2.6	2.6	2.6	decreasing	in imbalance
FPO	VL1012	29	28	29	28	34	32	28	34	32	35	32	34	0	2	2	2	2	0	2	2	2	2	0	in balance	0.6	0.7	0.5	0.5	1.0	0.8	0.4	0.7	1.1	0.6	0.8	1.0		
PGP	VL1012	1	4	3	2	7	4	5	2	1	1	1	1	0	0	0	3	2	1	2	1	1		1	in imbalance	1.2	1.1	1.1	1.1	1.1	1.0	1.1	1.0			0.9	0.7	-	in balance
HOK	VL1012	19	18	15	23	17	13	11	9	11	7	8	7	2	2	2	1	2	1	1	4	2	2	2	in imbalance	3.7	3.8	2.0	2.7	3.4	3.5	0.9	1.5	1.5	2.2	3.4	2.8	increasing	in imbalance
DFN	VL1218	19	15	15	13	13	13	12	12	11	7	8	10	3	3	3	2	3	1	1	2	2	2	2	in imbalance	3.1	2.2	2.1	2.1	2.2	2.1	2.9	3.2	3.2	3.5	3.5	2.7		
FPO	VL1218	4	3	3	4	3	1	2	1	1	1	1	1						1				0	0	in balance	0.7	0.6	0.5	0.5	1.1	0.7	0.4	0.3	0.4	0.3	0.5	0.6	increasing	in balance
DTS	VL0010	10	12	18	22	22	20	21	22	22	23	20	19	0	1	0	0	2	0	0	0	0	2	0	in balance	0.6	0.5	0.6	0.7	1.1	0.8	0.4	0.3	0.4	0.4	0.5	0.6	increasing	in balance
DTS	VL1012	51	53	48	49	51	51	54	49	49	52	54	52	0	0	0	0	0	0	0	0	0	0	0	in balance	0.5	0.5	0.5	0.7	1.0	0.8	0.6	0.6	0.6	0.7	0.9	0.7		
PS	VL1012		1	1	1	1	1	1	1	1	1	1	1					0	0	0	0	0	0	0			1.2	1.4	1.1	0.8	0.7	1.0	1.4	1.7	1.7	2.1	2.4	increasing	in imbalance
TM	VL1012							1	3	3	3	3	4							0			0	0	in balance							1.0	1.2	1.2	1.0	1.4	1.3	no trend	in imbalance

DTS	VL1218	106	102	89	80	76	71	67	68	71	70	67	66	1	1	1	1	1	2	2	2	1	1	0	in balance	1.0	1.0	0.9	1.0	1.3	1.0	1.1	0.8	0.9	0.4	0.8	0.8	no trend	in balance
PS	VL1218	2	2	3	2	1	1	1	1	1	1	1	2	0												1.3	1.2	1.4	1.1	0.8	0.7	1.0	1.4	1.7	1.7	2.1	2.4	increasing	in imbalance
DTS	VL1824	62	61	51	44	46	44	37	37	36	35	36	36	1	2	2	2	1	1	1	3	3	3	3	in imbalance	1.6	1.4	1.4	1.9	1.5	1.3	1.4	1.6	1.3	0.8	0.9	1.0	decreasing	in balance
TM	VL1824	1	1		1		3	4	4	3	3	3	3	1		0		0	0	0	0	0	0	0	in balance	1.5	1.4		1.2		0.9	1.0	1.3	1.4	1.3	1.5	1.7	increasing	in imbalance
DTS	VL2440	33	31	31	32	28	26	24	21	17	16	14	13	2	3	6	1	5	0	0	0	0	2	1	in imbalance	1.8	1.3	1.2	1.3	1.2	1.1	1.1	1.1	1.2	1.2	1.2	1.2	no trend	in imbalance
TM	VL2440	18	15	12	9	9	9	9	8	9	7	9	8	1	4	4	1	5	4	4	1	5	1	1	in imbalance	1.3	1.3	1.3	1.1	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.4	increasing	in imbalance
TM	VL40XX	13	13	11	8	9	8	8	10	9	10	8	9	0	4	4	1	5	5	4	4	6	6	1	in imbalance	1.1	1.2	1.2	1.0	0.9	1.0	1.0	1.1	1.1	1.1	1.4	1.5	increasing	in imbalance

1) TBB = beam trawl, DTS = demersal trawl and demersal seiner, PTS = pelagic trawls and seiners, DRB = dredges, MGP = polyvalent mobile gears, MGO = other mobile gears, PG = passive gears, HOK = gears using hooks,

DFN = drift nets and fixed nets, FPO = pots and traps, PGP = polyvalent passive gears, PMP = combining mobile and passive gears, PS = purse seines, TM = pelagic trawlers.