Fleet Report of The Netherlands for the year 2022

Following Art 22 of Regulation 1380/2013.

Summary

The active fleet at 31-12-2022 was in total 99.860 GT en 245.025 KW.

The reserved capacity was in total 63,269 GT and 97.264 KW, hence the Dutch fleet has not and will not exceed the capacity ceiling (166.859 GT, 350.736 kW respectively, according to EU Regulation 1380/2013).

It will be noted that for both parameters the sum of the active fleet and the reserved capacity is less than the capacity ceiling. As the capacity ceiling initially was set at the active fleet at the introduction of the entry/exit-regime in 2003, this may raise a question on the 'missing capacity'. The explanation is that in national legislation a maximum period of 6 years is set within the capacity that has been taken out from the fleet has to be replaced by a new vessel. If the term is expired for a given amount of capacity, then the capacity will be skipped from the register and is withdrawn permanently from the Dutch fleet-capacity. This has happened in a few occasions.

As can as well be concluded from the reserved capacity given above, this amount comprises of a significant part of the Dutch fleet. As this is already the situation for over 10 years it may seem if the maximum period for reserved capacity is not complied with. In that respect it is however possible to 'switch' a capacity-unit from reserved unto an active vessel, vice versa, hence there is no expectation that the current reserved capacity will all be materialized into active fleet within 6 years from now.

Fleet at 31-12-2022

	Nr of vessels	KW active	reserved KW	GT active	reserved GT
MFL1	518	213.672	84.805	91.301	58.845
MFL2	191	31.353	11.997	8.559	4.134

Note: it can be derived from this table that the sum of the reserved capacity in this table (both parameters) is less than the total reserved capacity stated above. This is due to some pending legal-administrative procedures for this capacity.

Indicators

All the indicators in this report have been calculated using the formulas in *Guidelines for analysis of the balance between fishing capacity and fishing opportunities according to Art. 22 of Regulation 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy (COM(2014)545)* and updated in 2020 based on the methods used in the Balance STECF EWG 20-11 (see also Beukhof and Hamon 2020).

Content of the report

As a first part a brief result of the decommission scheme in 2022 is presented.
Following this description, a Summarizing table and the two Parts of this report are presented; Part I, the biological indicators and Part II, the economic indicators.

Summary of the capacity results of the Decommission scheme in 2022.

In 2022 the Netherlands opened a decommission scheme under the Brexit Adjustment Reserve.

Vessels in the segments MFL1 and MFL2 that had lost fishing opportunities due to the Brexit could apply for decommissioning.
In total 51 vessels were scrapped. (6 <100 GT; 11 in 100-200 GT; 7 in 300-400 GT; 20 in 400-500 GT; and 7 >500 GT.)
The scrapped capacity was in total 53.318 kW and 17.487 GT.

The decommissioning will have to result in a similar decrease of the capacity ceiling according to EU Regulation 1380/2013 Annex 2, but up to date this deduction has not been formalized yet. The new ceilings will have to be 297.418 kW and 149.372 GT.

Taken into account the decommissioning described above and the 'normal annual adjustments in the fleet' the figures of the Dutch fleet ultimo 2023 are presented below.

The active fleet at 31-12-2023 was in total 82.665 GT en 150.573 KW.

The reserved capacity was in total 62.933 GT and 94.799 KW, hence the Dutch fleet has not and will not exceed the (still to be adjusted) new capacity ceiling, which will be 149.372 GT and 297.418 kW.

Fleet at 31-12-2023

	Nr of vessels	KW active	reserved KW	GT active	reserved GT
MFL1	466	159.335	83.427	73.934	59.168
MFL2	192	31.238	10.910	8.731	3.475

Note: it can be derived from this table that the sum of the reserved capacity in this table (both parameters) is less than the total reserved capacity stated above. This is due to some pending legal-administrative procedures for this capacity.

In Part II of this report, the Economic Indicators, there is also reference to the results of the decommissioning scheme in the first chapter of Part II.

Summarizing table from this report.

The table below presents a summary of the indicators (ecological and economical) described in this report. As indicated in the last column there are 4 segments out of balance. For the segments where an * is added this perceived imbalance is due to the characteristics of the Northsea sole stock prior to the latest benchmark in 2024. The consequences of the benchmark are to that extent that an Action Plan will not be necessary. The imbalance for the pelagic fleet are mainly due to the stock management of the Atlantic Mackerel, Blue Whiting and Atlanto Scandian herring. The negotiations between the Coastal States on the stock management are still continuing and pending these negotiations an Action Plan will not be initiated.

Fleet	Number of vessels	SHI	SHI Trend (2018-2022)	SAR	ROI	ROI trend	RoFTA	RoFTA trend	CR/BER	CR/BER trend	NPM	NPM trend	VUR	VUR trend	Balance?
Small scale and coastal	**216**	**0.63**		0	**2.00***	-	**4,6**	-	**4,26**	-	**38,8**	-	**0,22**	-	
PG-VL0010	156	0.60	-0.04	0	4.10*	-	9,4	-	10,97	-	51,2	-	0,21	-	Yes
PG-VL1012	20	0.70	-0.42	1	6.20*	-	18,5	-	15,87	-	52,8	-	0,57	-	No*
DFN-VL1824	18	-	-	0	-1.50*	-	-2,1	-	1,59	-	21	-	0,58	-	?
TBB-VL0010	22	-	-	0	-11.90*	-	-8,8	-	1,25	-	1,5	-	0,48	-	?
Small beam trawlers	**174**	**0.71**		0	**6.40***	-	**26,2**	-	**2,03**	-	**16,4**	-	**0,57**	-	
TBB-VL1218	30	-	-	0	9.90*	-	76,3	-	5,89	-	44,7	3.57 - increasing	0,44	-	Yes
TBB-VL1824	144	-	-	0	4.30*	-	13,1	-	1,57	-	10	-	0,64	-	Yes
Large beam trawlers	**79**	**0.69**		1	**2.40***	-2.07 - decreasing	**5,5**	-34.08 - decreasing	**1,18**	-0.28 - decreasing	**2,2**	-4.06 - decreasing	**0,62**	-	
TBB-VL2440	22	0.69	-0.34	1	0.70*	-	2,2	-	1,18	-	2,7	-	0,73	-	No*
TBB-VL40XX	57	0.69	-0.34	1	2.90*	-1.91 - decreasing	6,8	-42.94 - decreasing	1,18	-0.33 - decreasing	2,1	-4.51 - decreasing	0,65	-	No*
Demersal trawlers	**35**	**0.81**		0	**0.50***	-	**5,5**	-	**1,35**	-	**6,4**	-	0,89	-	
DTS-VL1824	6	-	-	0	6.20*	-	18,7	-	2,55	-	16,7	-	1	-	Yes
DTS-VL2440	29	-	-	0	-0.70*	-	2,9	-	1,26	-	5	-	0,89	-	Yes
Pelagic	**8**	**1.01**		1	**-7**	-	**-7,5**	-	**1,2**	-	**1,9**	-	1	no trend	
TM-VL40XX	8	1.01	0.01	1	-7.0*	-	-7,5	-	1,2	-	1,9	-	1	no trend	No

Part I

Biological indicators of the 2022 Dutch fleet

Two biological indicators (Sustainable Harvest Indicator (SHI) and Stock-at-risk (SAR) indicator) are used to assess whether the Dutch fleet is relying on overfished stocks, and/or is involved in causing a high biological risk to depleted stocks. The indicators in this chapter have been calculated using the formulas in *Guidelines for analysis of the balance between fishing capacity and fishing opportunities according to Art. 22 of Regulation 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy (COM(2014)545)*. Calculations were updated in 2021 based on the methods used in the Balance STECF EWG 19-13 (see also Beukhof and Hamon 2020). Since 2020, *Nephrops* functional units (FU) have been included in the biological analysis. As the Dutch fleet mainly fishes upon FU5 and FU33, splitting factors were calculated based on the sum of the Dutch landings of these FUs as reported by ICES from 2015-2022. Ratios of landings per FU varied very little between years. Table 1 gives the landings per FU and the resulting splitting factor for landings in each ICES subdivision.

Table 1: Dutch Nephrops landings per FU, and resulting splitting factors per ICES subdivision.

ICES subdivision	FU	Stock	NLD Landings weight	Subdivion sum	Splitting factor
4.a	32	nep.fu.32	1	10	0.1
4.a	7	nep.fu.7	9	10	0.9
4.b	32	nep.fu.32	0	7992	0
4.b	5	nep.fu.5	4694	7992	0.59
4.b	6	nep.fu.6	142	7992	0.02
4.b	33	nep.fu.33	3156	7992	0.39
4.c	5	nep.fu.5	13	13	1
7.a	14	nep.fu.14	0		0
7.a	19	nep.fu.19	0		0

The indicators were calculated for the eleven active fleet segments, as well as for aggregated fleet clusters. The interpretation of the indicators with regards to the balance is indicated in Table 1. For SHI, a trend is calculated following STECF-20-11 (Table 2).

Table 2. Interpretation of biological indicators.

Indicators	Out of balance	In balance
SHI	SHI > 1	SHI ≤ 1
SAR	SAR > 0	SAR = 0

Table 3. Interpretation of the trend in SHI.

Slope	Results
> 0.05	Increasing

Slope	Results
< -0.05	Decreasing
-0.05 ≤ slope ≤ 0.05	No clear trend

Sustainable Harvest Indicator

The SHI was calculated based on the Dutch landing value per fleet segment in 2022. Values of F and F_{MSY} were taken from ICES stock advice. SHI values and trends in SHI are only given for fleet segments where the proportion of stocks with assessment data available in the landings value exceeded 0.4 (SHI40). For segments for which SHI values could be calculated, the underlying F, F_{MSY} and landings value are presented. The main results are presented in Table 3 and Figure 1, and will be discussed below in detail.

Table 4. The SHI for the Dutch fleet in 2022, trend of in SHI presented as the slope of the trend, the number of stocks included in the analysis and the percentage of landings value for which stock assessment data was available. Clustered fleets are in grey, whereas the corresponding disaggregated STECF fleet segments are presented below each clustered fleet. No trend was calculated for the clustered fleets.

Fleet	SHI	Trend (2018-2022)	Number of stocks included	Proportion of landings value with stock assessment data available (SHI40)
Small scale and coastal	**0.63**		**12**	**0.65**
PG-VL0010	0.60	-0.04	10	0.80
PG-VL1012	0.70	-0.42	10	0.94
DFN-VL1824	-	-	9	0.28
TBB-VL0010	-	-	5	0.04
Small beam trawlers	**0.71**		**19**	**0.04**
TBB-VL1218	-	-	15	0.00
TBB-VL1824	-	-	19	0.05
Large beam trawlers	**0.69**		**19**	**0.89**
TBB-VL2440	0.69	-0.34	18	0.64
TBB-VL40XX	0.69	-0.34	19	0.95
Demersal trawlers	**0.81**		**27**	**0.36**
DTS-VL1824	-	-	17	0.25
DTS-VL2440	-	-	27	0.39
Pelagic	**1.01**		**13**	**0.84**
TM-VL40XX	1.01	0.01	13	0.84

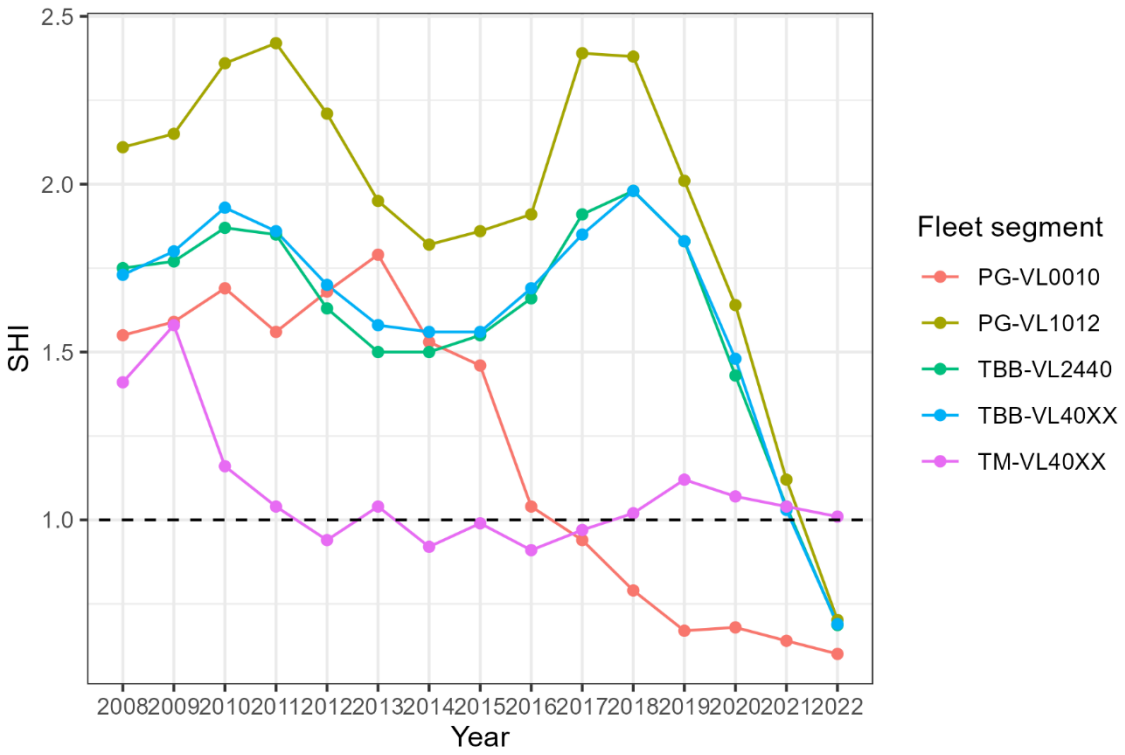

Figure 1. Trends in the Sustainable Harvest Indicator (SHI) from 2008 to 2022 for the fleet segments (pelagic, and large beam trawlers and passive gears) that were calculated in this report. Data from 2008-2016 were extracted from STECF-20-11, data from 2017-2021 were extracted from STECF-23-13, whereas data from 2022

are from this fleet report. Values below or above 1 (dashed line) suggest that a fleet segment is in or out of balance, respectively.

Small scale and coastal fleet

For the drift and fixed nets segment (DFN-VL1824) and the small-scale beam trawl segment (TBB-VL0010), the landings value of stocks with data on F and F_{MSY} was less than 40% of the total landings value for these segments, and therefore, no SHI was calculated (Table 3). This was mostly due to lack of assessment data for invertebrates, such as brown shrimp (*Crangon crangon*) and brown crab (*Cancer pagurus).*

For the passive gear segments PG-VL0010 and PG-VL1012 the SHI for 2022 was calculated to be 0.60 and 0.70, respectively (Table 3). SHI for PG-VL0010 was largely determined by landings of sea bass (*Dicentrarchus labrax),* which had an estimated F/F_{MSY} of 0.60*.* For PG-VL1012 SHI was largely determined by landings of common sole (*Solea solea*) which contributed 90% of total landings value of 0.71.

SHI for PG-VL0010 has been below 1 since 2017 (Figure 1) and the decreasing trends of previous years has stabilized (Table 3). For PG-VL1012, 2022 was the first year in which SHI was estimated to be smaller than 1. The SHI of this fleet segment shows a strong decreasing trend. This is mostly due to a decreasing trend in F/F_{MSY} of the most important stock, sol.27.4.

Table 5. F, F_{MSY}, ratio of F over F_{MSY}, landing value and cumulative proportion of stocks of the passive gears segment 00-10m (PG-VL0010) in terms of total landing value in 2022. Stocks are listed from highest to lowest cumulative contribution.

Stock	F	F_{MSY}	F/F_{MSY}	Landing value (€)	Cumulative proportion
bss.27.4bc7ad-h	0.10	0.17	0.60	1,680,965	0.961
sol.27.4	0.15	0.21	0.71	61,648	0.996
mac.27.nea	0.30	0.26	1.17	2,719	0.998
rjh.27.4c7d	0.26	1.00	0.26	1,159	0.998
tur.27.4	0.34	0.36	0.94	1,013	0.999
bll.27.3a47de	0.49	1.00	0.49	918	1
cod.27.47d20	0.36	0.28	1.29	344	1
ple.27.420	0.09	0.15	0.56	227	1
rjc.27.3a47d	0.44	1.00	0.44	134	1
pok.27.3a46	0.33	0.36	0.90	3	1

Table 6: F, F_{MSY}, ratio of F over F_{MSY}, landing value and cumulative proportion of stocks of the passive gears segment 10-12m (PG-VL1012) in terms of total landing value in 2022. Stocks are listed from highest to lowest cumulative contribution.

Stock	F	F_{MSY}	F/F_{MSY}	Landing value (€)	Cumulative proportion
sol.27.4	0.15	0.21	0.71	353,416	0.897
bss.27.4bc7ad-h	0.10	0.17	0.60	40,037	0.998
tur.27.4	0.34	0.36	0.94	356	0.999
ple.27.420	0.09	0.15	0.56	200	1
cod.27.47d20	0.36	0.28	1.29	61	1
mac.27.nea	0.30	0.26	1.17	39	1
rjc.27.3a47d	0.44	1.00	0.44	29	1
bll.27.3a47de	0.49	1.00	0.49	23	1
rjh.27.4c7d	0.26	1.00	0.26	7	1
her.27.3a47d	0.23	0.31	0.73	1	1

Small beam trawlers

The proportion of landings value for the two small beam trawler segments with stocks for which stock assessment data was available was very low at 0.00 and 0.07, and therefore, no SHI was calculated (Table 3). These low percentages can be explained by the large amount of landings of brown shrimp and other invertebrates for which there is no stock assessment.

Large beam trawlers

The SHI for the large beam trawler segments in 2022 is 0.69 for both the 24-40 m segment and the >40 m segment (Table 3). The stocks that contributed together around 85% to the total landing value of both segments are sole (sol.27.4) and plaice (ple.27.420) (Table 6, Table 7). F/F_{MSY} was estimated to be 0.71 for North Sea sole and 0.56 for plaice in the North Sea and Skagerrak.

The SHI of both fleet segments as well as the clustered fleet show a strong decreasing trend and have dropped below 1 for the first time throughout the time series in 2022 (Figure 1, Table 3). This is mainly caused by the decrease in in F/F_{MSY} of both plaice and sole.

Table 7. F, F_{MSY}, ratio of F over F_{MSY}, landing value and cumulative proportion of stocks of the large beam trawler segment between 24-40m (TBB-VL2440) in terms of total landing value in 2022. Stocks are listed from highest to lowest cumulative contribution.

Stock	F	F_{MSY}	F/F_{MSY}	Landing value (€)	Cumulative proportion
sol.27.4	0.15	0.21	0.71	6,871,560	0.594
ple.27.420	0.09	0.15	0.56	3,025,364	0.855
tur.27.4	0.34	0.36	0.94	1,045,238	0.945
bll.27.3a47de	0.49	1.00	0.49	305,049	0.972
sol.27.20-24	0.18	0.26	0.68	48,463	0.976
bss.27.4bc7ad-h	0.10	0.17	0.60	42,960	0.98
cod.27.47d20	0.36	0.28	1.29	41,784	0.983
rjc.27.3a47d	0.44	1.00	0.44	36,830	0.987
rjh.27.4c7d	0.26	1.00	0.26	35,314	0.99
whg.27.47d	0.10	0.39	0.26	35,200	0.993
tur.27.3a	0.57	1.00	0.57	30,747	0.995
mac.27.nea	0.30	0.26	1.17	23,721	0.997

rjm.27.3a47d	0.34	1.00	0.34	10,809	0.998
nep.fu.6	12.80	8.12	1.58	9,405	0.999
had.27.46a20	0.12	0.24	0.50	7,838	1
hke.27.3a46-8abd	0.19	0.24	0.80	2,276	1
wit.27.3a47d	0.25	0.16	1.52	521	1
pok.27.3a46	0.33	0.36	0.90	363	1

Table 8. F. F_{MSY}. ratio of F over F_{MSY}. landing value and cumulative proportion of stocks of the large beam trawler segment >40m (TBB-VL40XX) in terms of total landing value in 2022. Stocks are listed from highest to lowest cumulative contribution.

Stock	F	F_{MSY}	F/F_{MSY}	Landing value (€)	Cumulative proportion
sol.27.4	0.15	0.21	0.71	47,062,853	0.593
ple.27.420	0.09	0.15	0.56	20,321,986	0.849
tur.27.4	0.34	0.36	0.94	7,808,076	0.947
bll.27.3a47de	0.49	1.00	0.49	2,256,785	0.976
cod.27.47d20	0.36	0.28	1.29	466,250	0.982
tur.27.3a	0.57	1.00	0.57	260,711	0.985
bss.27.4bc7ad-h	0.10	0.17	0.60	246,160	0.988
rjc.27.3a47d	0.44	1.00	0.44	236,950	0.991
whg.27.47d	0.10	0.39	0.26	166,588	0.993
rjh.27.4c7d	0.26	1.00	0.26	141,761	0.995
sol.27.20-24	0.18	0.26	0.68	138,307	0.997
rjm.27.3a47d	0.34	1.00	0.34	134,365	0.998
had.27.46a20	0.12	0.24	0.50	60,014	0.999
wit.27.3a47d	0.25	0.16	1.52	41,961	0.999
hke.27.3a46-8abd	0.19	0.24	0.80	29,462	1
pok.27.3a46	0.33	0.36	0.90	9,565	1
nep.fu.6	12.80	8.12	1.58	617	1
mac.27.nea	0.30	0.26	1.17	244	1
her.27.3a47d	0.23	0.31	0.73	52	1

Demersal trawlers

The proportion of landings value for the two demersal trawler segments DTS-VL1824 and DTS-VL2440 with stocks for which stock assessment data was available was below the threshold of 0.4 (0.25 and 0.39, respectively). Therefore, no SHI was calculated (Table 3). These low percentages can be explained by the large amount of landings of squids (*Loligo sp.*), red mullet (*Mullus surmuletus*), and *Nephrops norvegicus* from FUs 5 and 33, all of which are not managed with F_{MSY}.

Pelagic fleet

The SHI for the pelagic fleet segment in 2022 was estimated at 1.01 (Table 3). Over 90% of the landings value comes from North Sea herring, blue whiting, mackerel and horse mackerel (Table 8). Of these, F/F_{MSY} was below 1 for herring (0.73) and above 1 for blue whiting (1.28), mackerel (1.17) and horse mackerel (1.01).

Splitting of the landings data of herring in ICES sub-division 4a over the two stocks in this area was done by assigning all catches to North Sea herring (her.27.3a47d), as the Dutch pelagic fleet has not been catching any Norwegian spring spawning herring (her.27.1-24a514a) in this area in recent years. Note that this is different from the splitting factors from Annex IV in STECF-20-11.

The SHI has been around 1 since 2014 and shows no significant trend over time (Figure 1).

Table 9: F. F_{MSY}. ratio of F over F_{MSY}. landing value and cumulative proportion of stocks of the pelagic trawler segment >40m (TM-VL40XX) in terms of total landing value in 2022. Stocks are listed from highest to lowest cumulative contribution.

Stock	F	F_{MSY}	F/F_{MSY}	Landing value (€)	Cumulative proportion
her.27.3a47d	0.23	0.31	0.73	25,278,964	0.333
whb.27.1-91214	0.41	0.32	1.28	17,974,798	0.57
mac.27.nea	0.30	0.26	1.17	16,826,192	0.792
hom.27.2a4a5b6a7a-ce-k8	0.08	0.07	1.01	10,006,460	0.924
aru.27.5b6a	0.21	0.24	0.88	4,175,470	0.979
her.27.1-24a514a	0.18	0.16	1.16	1,260,746	0.995
had.27.46a20	0.12	0.24	0.50	181,277	0.998
hke.27.3a46-8abd	0.19	0.24	0.80	132,147	0.999
whg.27.47d	0.10	0.39	0.26	38,201	1
pok.27.3a46	0.33	0.36	0.90	9,267	1
had.27.7b-k	0.42	0.35	1.18	1,596	1
whg.27.7b-ce-k	0.66	0.38	1.76	1,079	1
mon.27.78abd	0.12	0.19	0.64	0	1

Stock-at-risk indicator

The stock-at-risk (SAR) indicator was calculated based on the Dutch landings (in weight) per fleet segment and clustered fleet in 2022 and the total landings per stock as estimated by ICES. Values of SSB and B_{lim} were taken from ICES stock advice. For ICES category 3 stocks with a production model (e.g. SPiCT) the B/B_{MSY} estimate was used to assess criterion A (whether stock is being below B_{lim}). The main results are presented in Table 8, and are discussed in more detail below.

Table 8. The stock-at-risk (SAR) indicator for the Dutch fleet segments in 2020, and the corresponding stocks at risk. Stock and SAR-value in parentheses suggest another stock at risk, but it is argued in the text why this stock should be included in the SAR calculation. Clustered fleets are in grey, whereas the corresponding disaggregated STECF fleet segments are presented below each clustered fleet.

Fleet	SAR	Stocks at risk
Small scale and coastal	0	
PG-VL0010	0	
PG-VL1012	1	sol.27.4
DFN-VL1824	0	
TBB-VL0010	0	
Small beam trawlers	0	
TBB-VL1218	0	
TBB-VL1824	0	
Large beam trawlers	1	sol.27.4
TBB-VL2440	1	sol.27.4
TBB-VL40XX	1	sol.27.4
Demersal trawlers	0	
DTS-VL1824	0	
DTS-VL2440	0	

Pelagic	1	hom.27.2a4a5b6a7a-ce-k8
TM-VL40XX	1	hom.27.2a4a5b6a7a-ce-k8

Small scale and coastal fleet

The number of stocks-at-risk for the passive gear segment with vessel lengths 10-12m (PG-VL1012) was found to be 1 (Table 8), namely sol.27.4. This segment relies for more than 10% on sole (criterion 1), and the SBB of North Sea sole was estimated to be below B_{lim} (criterion A).

Small beam trawlers

No stocks at risk were identified for the two small beam trawler segments (Table 8).

Large beam trawlers

The number of stocks-at-risk for the large beam trawler segment with vessel lengths 24-40m (TBB-VL2440) was found to be 1 (Table 8), namely sol.27.4. This segment relies for more than 10% on sole (criterion 1), and the SBB of North Sea sole was estimated to be below B_{lim} (criterion A)..

The number of stocks-at-risk for the large beam trawler segment with vessel lengths above 40m (TBB-VL40XX) was found to be 1 (Table 8), namely sol.27.4. This segment relies for more than 10% on sole (criterion 1) and takes more than 10% of the landings of the stock (criterion 2), and the SBB of North Sea sole was estimated to be below B_{lim} (criterion A).

Demersal trawlers

No stocks at risk were identified for the two demersal trawler segments (Table 8).

Pelagic fleet

The number of stocks at risk for the pelagic fleet in 2021 is assessed to be 1 (Table 8), namely horse mackerel in the Northeast Atlantic (hom.27.2a4a5b6a7a-ce-k8). The landings of the pelagic fleet segment comprised more than 10% of the total landings of the stock (criterion 2). The SSB of horse mackerel in the Northeast Atlantic is estimated to be below B_{lim} (criterion A).

Summary and comments to the biological indicators

According to the thresholds and criteria in the 2014 Commission Guidelines, of all segments for which SHI could be calculated, the only segment that was found to be out of balance was TM-VL40XX according to the SHI (Table 3). According to the SAR indicator, 4 segments were out of balance: PG-VL1012, TBB-VL2440, TBB-VL40XX and TM-VL40XX. After several consecutive years of decreasing SHI trends, all SHI values are now below 1, except for TM-VL40XX. For six segments, the SHI could not be calculated. The SAR indicator of these segments was zero, suggesting that these segments are in balance according to the SAR indicator.

Discrepancies exist between the current Dutch fleet report and last year's fleet report: most strikingly, last year's report showed that SHI values for several segments had dropped below 1 for the first time that year. This year's report shows 2022, not 2021, as the first year these SHI values drop below 1. This is mostly caused by the importance of North Sea sole (sol.27.4) for these segments, as this stock assessment shows strong retrospective patterns (ICES, 2023). Retrospective patterns are described as "consistent directional changes in assessment estimates of biomass in a given year when additional years of data are added to an assessment" (Szuwalski et al., 2018). In the case of North Sea sole, the estimates of the strength of recruitment of the 2018 year class was revised downwards as more data was added in the assessment. This retrospective pattern has had a large impact on the indicator values for the Dutch fleet. In early 2024, sol.27.4 underwent a benchmark (a complete revision of the stock assessment model), which appears to have had a large effect on stock perception and subsequently, on the SHI and SAR values calculated by STECF 24-13 and the 2025 Dutch fleet report (ICES, 2024).

Discrepancies can also be found between the Dutch fleet reports and STECF reports, for which several reasons can be identified. Firstly, the landings data per ICES subdivision has to be assigned to several FUs for *Nephrops norvegicus*. For the Dutch fleet report, this is done based on proportions of landings of all Dutch fleets in the FUs for the years 2015-2022. How these landings are assigned can have a large effect on resulting SHI and SAR values. This is likely (part of) the reason why the STECF reports are often able to produce an SHI estimate for the demersal segments (DTS-VL1824 and DTSVL2440), as *Nephrops* landings in these segments are assigned to FU6, FU8 and FU9. Landings data show that almost all of the Dutch landings come from FU5 and FU33 (which are not assessed according with F_{MSY}). In future, a similar splitting will be necessary for Northern shelf cod, as from 2023 onward fishing mortality F is calculated for three subpopulations (Southern, Northern and Viking) separately. Other discrepancies can be caused by the fact that the STECF indicators are calculated using (ICES) advice from the current year, which is not yet available when the Dutch fleet report is produced.

Uncertainties around the biological indicators

The estimates of F and F_{MSY} depend on the quality of the assessment. Many of the stock assessments used to define the F/ F_{MSY} ratio are uncertain, and some are even highly uncertain, such as for western horse mackerel and North Sea cod. This affects the calculation of SHI, also acknowledged by STECF-20-11. Longer trends in SHI values are therefore useful to interpret any potential fleet over-capacity.

Fisheries advice aims to fish stocks at or below F_{MSY}. Given the uncertain nature of estimation of stock size and exploitation rate, it is to be expected that, looking back, F exceeds F_{MSY} in some years while management was in line with F_{MSY} advice. Longer-term perspectives on SHI are indicative of constant over- or under-exploitation of target species.

Stock assessments regularly go through benchmarks, where the perception of the stock and its reference points can change. It may therefore happen that advice given in the past and TACs set based on that advice were, looking back, do not follow the MSY approach. This can lead to situations where before the benchmark, indicators are calculated to be pointing towards balance between fleet capacity and fishing opportunities, whereas calculating the indicators after the benchmark, indicators point towards fleets being out of balance. By making use of the most recent stock assessment available when calculating the indictors, the indicators do not consider the knowledge on the stock that managers had at the time the TACs were set. A revision of the indicators and their calculation could take this issue into account.

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Part II

Economic and social indicators for the 2022 Dutch fleet

There were 714 vessels in the Dutch fleet in 2022 (680 vessels in 2023), that were allowed to fish commercially in marine waters. From these vessels 512 were considered active based on logbook information (see Table 1). The active fleet is then split into several fleets, the small coastal fishery, the small and large beamtrawlers (<24m or >24m), the demersal trawlers and the pelagic trawlers. Except for the pelagic trawlers, those fleets are themselves made of several segments defined by the data collection framework (DCF) and used by STECF. The fleet segments which include the main fleets (commercially active cutters and trawlers grossing more than 50.000 euro) consisted of 286 vessels and cumulated about 99% of the landings value in 2023.

A number of fleets are clustered because the number of vessels falls below the threshold of 10 vessels used to protect confidentiality of data. Particularly, three clusters pool together a large number of very small fleets (less than 10 vessels). The TBB_VL0010 cluster includes all the fleets operating with active gears (dredges, demersal trawls and seines, purse seines, beam trawls, and mid-water trawls) with vessels shorter than 12 meters. The TBB_VL1218 cluster includes all the small fleets (less than 10 vessels) operating with active gears (dredges, demersal trawls and seines, purse seines, beam trawls, and mid-water trawls) with vessels longer than 12 meters. And finally the DFN_VL1218 cluster covers all the fleets with vessels longer than 12m operating with passive gears **or** with a total fishing revenue lower than EUR 50 k. Those choices were made to pool the fleets with fleets with as similar cost structures as possible. As a result of the workshop on comparison of the AER and FDI data in 2023, the procedure to report on the total fleet has been adapted slightly, and now the fleet also includes all vessels that were active during but have left the fishing fleet before the end of the year. As a result, the number of vessels has increased slightly for most segments and years.

Number of vessels per fleet (in grey) and disaggregated by STECF segment. The numbers in parenthesis correspond to the number of vessels that left the fleet in 2023 due to the decommissioning scheme.

Fleet	2017	2018	2019	2020	2021	2022	2023
Small coastal	220	215	210	222	216	216	201
DFN_VL1824	14	17	18	15	18	18	19
PG_VL0010	161	162	160	172	161	156	147
PG_VL1012	18	18	18	20	20	20	13
TBB_VL0010	27	18	14	15	17	22	22
Small beamtrawlers	179	186	172	173	173 (7)	174 (5)	163 (3)
TBB_VL1218	23	24	24	19	24	30	32
TBB_VL1824	156	162	148	154	149 (7)	144 (5)	131 (3)
Large beamtrawlers	85	89	86	88	87 (35)	79 (29)	56 (8)

Fleet	2017	2018	2019	2020	2021	2022	2023
TBB_VL2440	27	29	25	28	27 (10)	22 (7)	15 (2)
TBB_VL40XX	58	60	61	60	60 (25)	57 (22)	41 (6)
Demersal trawlers	35	33	50	44	43 (8)	35 (4)	40 (2)
DTS_VL1824	8	5	17	10	7	6	10
DTS_VL2440	27	28	33	34	36 (8)	29 (4)	30 (2)
Pelagic trawlers	8	8	7	6	8	8	8
TM_VL40XX	8	8	7	6	8	8	8
Inactive	211	199	206	189	196 (1)	202 (12)	212
INACTIVE_VL0010	141	137	139	120	132	132	146
INACTIVE_VL1012	13	12	14	13	13	12	18
INACTIVE_VL1218	20	16	15	19	15	15	19
INACTIVE_VL1824	13	13	17	18	20 (1)	20 (2)	20
INACTIVE_VL2440	16	17	17	14	12	15 (6)	6
INACTIVE_VL40XX	8	4	4	5	4	8 (4)	3

All the indicators in this chapter have been calculated using the formulas in *Guidelines for analysis of the balance between fishing capacity and fishing opportunities according to Art. 22 of Regulation 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy (COM(2014)545)* and updated in 2020 based on the methods used in the Balance STECF EWG 19-13 (see also Beukhof and Hamon 2020). Changes to the method used led to small changes in the indicator value compared to previous years reports. Those changes included i) using real values adjusted for inflation using the consumer price index, ii) opportunity costs of capital are calculated using real interest rate and iii) the return on investment (ROI) should be compared to the 5 year average interest rate. The real interest rate used to calculate opportunity costs of capital and the 5 years average low risk long term interest rate are shown below in table 2.

Inflation, interest rate, real interest rate, 5 year average low risk long term interest rate and consumer price index for the Netherlands. sources: Eurostat and ECB

indicator	2017	2018	2019	2020	2021	2022
inflation	1.30	1.60	2.70	1.10	2.80	11.60
interest rate	0.52	0.58	0.01	-0.38	-0.33	1.38
real interest rate	-0.77	-1.01	-2.62	-1.46	-3.04	-9.16
5yr average interest rate	-	-	-	-	0.08	0.25
consumer price index	0.95	0.96	0.99	1.00	1.03	1.15

Below the results for specific segments are discussed in more detail.

The large beamtrawlers were the most affected by the 2023 decommissioning scheme

In August 2023, 51 fishing vessels have been decommissioned from the Dutch fishing fleet. In 2022, 50 were still Dutch fleet register. Of those, 38 still actively fished in 2022 (see numbers in parenthesis in table 1) representing 7% of the active fleet in vessel numbers. The fleet segment the most affected by the decommissioning scheme is the large beamtrawl fleet with 29 out of 79 vessels active in 2022 leaving the fleet (so about 37%) and particularly the vessels larger than 40m (TBB_VL40XX) with 39% (or 22 out of 57) of the fleet exiting the fishery, the beamtrawlers between 24 and 40 m lost 32% of their vessels (7 out of 22). Other fleets were impacted by the decommissioning scheme, namely the demersal trawlers 24-40m, DTS_VL2440 (14% of the vessels left or 4 out of 29) and to a lesser extend beamtrawlers 18-24m, TBB_VL1824 (3% of the vessels left or 5 out of 144).

In 2022, 12 vessels taking the decommissioning scheme had already stopped fishing due to high fuel costs and lack of future perspectives. Those did not register any fishing activity that year and were categorized as inactive, increasing the amount of inactive capacity for vessels larger than 40 m that year (usually 4 to 5 vessels, up to 8 in 2022). In 2023, only 13 of the decommissioning vessels still operated in the fishery.

Economic indicators

The economic indicators are calculated in real terms with 2020 as base year (see Table 2 for the consumer index price used for the calculations), this is in line with STECF practice and Beukhof and Hamon (2020). Six socio-economic indicators are given in this section. ROI (return on investment) and RoFTA (Return on Fixed Tangible Assets) are both provided because the lack of market on fishing rights since 2019 makes the estimation of the value of property rights highly uncertain and negatively impacts the usefulness of the ROI. The interpretation of the ROI, the RoFTA, CR/BER (current revenue over break even revenue) and NPM (net profit margin) following the STECF guidelines are found in Table 3.

Interpretation of economic indicators.

Indicators	Out of balance	Not sufficiently profitable	In balance
ROI*	ROI < 0	0 <= ROI < 5yr average interest rate	ROI > 5yr average interest rate
RoFTA	RoFTA < 0	0 <= RoFTA < 5yr average interest rate	RoFTA > 5yr average interest rate
CR/BER	CR/BER < 1	-	CR/BER > 1
NPM	NPM <= 0	0 <= NPM < 10	NPM >= 10

*due to an inactive fishing right market, the value of rights have been estimated using the RCGECON suggested method, ROI values in 2019-2022 are likely underestimated and cannot be compared to those of earlier years

Total fleet

The economic indicators of the Dutch fleet demonstrate that the situation of the fleet is degrading as three indicators show a significantly decreasing trend over the last 5 years (ROI, RoFTa, and GVA). The results in 2022 are (still) positive. The social indicators of the total fleet are still positive with the average crew costs per full time equivalent (FTE) above the average

Dutch gross salary[1] and a gross value added (GVA) of more than 114 million euro in 2022. The positive return on Fixed Tangible Assets (RoFTA) is still above the 5 year average interest rate which suggests the long-term viability of the fleet. As the average age of the vessels is however rather old for most vessels and the value of the tangible assets (vessels) therefore relatively low, it is questionable whether the exploitation of new vessels would be economically viable in these uncertain times.

The 2022 financial results of the Dutch fleets have been greatly affected by the higher fuel prices as for other fleets in Europe. The Dutch fleets are for the most part operating with towed gears and are therefore particularly sensitive to change in fuel prices.

Economic and social indicators total Dutch fleet. ROI: Return on Investment in %, RoFTA: Return on Fixed Tangible Assets in %, CR/BER: current revenue over break-even revenue, NPM: net profit margin in %, Crew Costs/FTE: crew costs per full time equivalent in thousand euro and GVA: gross value added in million euro. Trend calculated over the last 5 years of data, '-' indicates a non-significant trend at 5%

Indicators	2017	2018	2019	2020	2021	2022	trend
ROI	6.70	6.80	3.90	3.50	3.40	0.8*	-1.25 - decreasing
RoFTA	28.50	27.00	11.20	10.60	9.70	1.9	-5.17 - decreasing
CR/BER	1.82	1.83	1.42	1.35	1.42	1.5	-
NPM	15.80	14.60	7.90	7.60	7.80	6.5	-
Crew Costs/FTE	83.80	83.50	65.80	69.20	67.00	65.4	-
GVA	248.60	234.40	157.20	153.30	150.40	114.0	-24.76 - decreasing

*due to an inactive fishing right market, the value of rights have been estimated using the RCGECON suggested method. As this method is still under development the outcomes should be regarded as preliminary and treated with caution.,

Notes:

- In 2020 owners of fishing vessels could apply for a financial compensation for not sailing for a maximum period of 5 weeks. This subsidy was not included in the income for the calculation of the economic indicators.

- due to an inactive fishing right market, the value of rights (including all ITQ's and permits) have been estimated using the RCGECON suggested method[2]. Therefore these values cannot be compared to previous years. As this method is still under development the outcomes should be regarded as preliminary and treated with caution.

Small coastal fleets

This section was added in 2020 to allow comparison with the balance report of STECF. The economic data for these fleets are collected using questionnaires and the quality of the response is highly variable between years. In 2022, 216 vessels were operating in the small coastal fisheries. They are a heterogeneous group of vessels, including mainly smaller

[1] Average Dutch labour cost was around EUR 66.4 k/year in 2022 https://opendata.cbs.nl/statline/#/CBS/nl/dataset/84163NED/table?ts=1715953658744

[2] https://datacollection.jrc.ec.europa.eu/documents/d/dcf/guidelines%20on%20valuation%20of%20Fishing%20rights

vessels, vessel using active gears with an annual fishing revenue lower than EUR 50 k, vessels using passive gears and vessels fishing for shellfish (because of the lack of data and the similarity in cost structure, the dredgers DRB 24-40 have been pooled with the small beamtrawl fleet TBB 12-18 since 2017). In 2022, the small coastal fleets represented about 1% of the total Dutch value of landings.

The small scale fleet targets a mix of species among which seabass is the most important (47% of the value of landings in 2022, 39% in 2023). Other important species including edible crab and sole (respectively 17 and 17% in 2022) are more variable.

Most economic indicators of the small scall fleets are showing segments that are in balance with no significant trend. The ROI and RoFTA of the TBB_VL0010 and DFN_VL1824 segments indicate that those segments are out of balance.

It should be noted that the high year-to-year and between segments variability is likely due to the quality of the data rather than real changes in the fleet, as response rates on the questionnaire for the economic data have been low during the last years. Given the quality of the data of these segments, trends would be hard to detect and any trends is more likely an artifact from the data.

Economic and social indicators small coastal fleet (in grey) and for all the STECF segments in that cluster. ROI: Return on Investment in %, RoFTA: Return on Fixed Tangible Assets in %, CR/BER: current revenue over break-even revenue, NPM: net profit margin in %, Crew Costs/FTE: crew costs per full time equivalent in thousand euro and GVA: gross value added in million euro. Trend calculated over the last 5 years of data, '-' indicates a non-significant trend at 5% . Missing values from 2017 for some segments are due to the aggregation of the fleets with less than 10 vessels with larger fleets.

Fleet	Indicators	2017	2018	2019	2020	2021	2022	trend
Small coastal	**ROI**	**3.10**	**5.20**	**6.00**	**-0.60**	**-0.00**	**2.00***	**-**
DFN_VL1824	ROI	5.60	4.10	8.30	-0.80	-0.80	-1.50*	-
PG_VL0010	ROI	3.50	6.40	6.00	0.50	1.70	4.10*	-
PG_VL1012	ROI	3.50	6.40	6.00	0.40	2.00	6.20*	-
TBB_VL0010	ROI	-0.20	-5.40	-8.80	-75.30	-15.20	-11.90*	-
Small coastal	**RoFTA**	**6.60**	**14.40**	**18.40**	**-0.70**	**0.50**	**4.60**	**-**
DFN_VL1824	RoFTA	14.50	10.10	37.30	-0.70	-0.50	-2.10	-
PG_VL0010	RoFTA	8.00	21.70	18.60	1.10	3.70	9.40	-
PG_VL1012	RoFTA	8.00	21.70	18.60	0.80	4.30	18.50	-
TBB_VL0010	RoFTA	-0.40	-5.40	-9.00	-75.60	-15.00	-8.80	-
Small coastal	**CR/BER**	**1.70**	**2.50**	**2.98**	**1.09**	**1.45**	**4.26**	**-**
DFN_VL1824	CR/BER	2.73	2.22	6.27	1.10	1.41	1.59	-
PG_VL0010	CR/BER	1.73	2.91	2.80	1.32	1.87	10.97	-
PG_VL1012	CR/BER	1.73	2.91	2.80	1.25	1.95	15.87	-
TBB_VL0010	CR/BER	1.05	0.31	0.16	0.07	0.09	1.25	-
Small coastal	**NPM**	**22.40**	**32.40**	**33.20**	**3.90**	**12.90**	**38.80**	**-**
DFN_VL1824	NPM	36.00	25.00	41.20	4.50	11.40	21.00	-

Fleet	Indicators	2017	2018	2019	2020	2021	2022	trend
PG_VL0010	NPM	22.70	37.60	32.40	11.40	20.80	51.20	-
PG_VL1012	NPM	22.70	37.60	32.40	8.60	21.90	52.80	-
TBB_VL0010	NPM	2.90	-72.40	-171.30	-313.00	-104.30	1.50	-
Small coastal	**Crew Costs/FTE**	**12.80**	**19.90**	**12.30**	**24.30**	**18.90**	**26.40**	**-**
DFN_VL1824	Crew Costs/FTE	15.10	45.40	38.40	74.10	62.80	47.60	-
PG_VL0010	Crew Costs/FTE	11.70	16.50	8.80	19.40	14.60	26.50	-
PG_VL1012	Crew Costs/FTE	11.70	16.50	8.80	12.90	14.60	26.50	-
TBB_VL0010	Crew Costs/FTE	30.00	17.20	18.10	32.50	23.70	19.70	-
Small coastal	**GVA**	**3.20**	**5.60**	**3.70**	**2.60**	**2.40**	**2.60**	**-**
DFN_VL1824	GVA	0.40	1.20	1.10	0.90	0.60	0.40	-0.21 - decreasing
PG_VL0010	GVA	2.20	3.90	2.30	1.70	1.60	1.60	-
PG_VL1012	GVA	0.20	0.40	0.30	0.20	0.20	0.30	-
TBB_VL0010	GVA	0.30	0.00	-0.00	-0.20	-0.00	0.20	-

*due to an inactive fishing right market, the value of rights have been estimated using the RCGECON suggested method. As this method is still under development the outcomes should be regarded as preliminary and treated with caution.,

Beamtrawlers shorter than 24 meters

In 2022 the fleet segment beamtrawlers shorter than 24 meters consists of 174 vessels fishing mainly for shrimps (representing 63% of the fishing revenue). In addition, this segment also included some vessels dredging for shellfish, that were clustered with together with the beamtrawlers 12-18m. These vessels mainly caught, surf clams and razor clams (representing respectively 22% and 9% of the total fishing revenue of this segment in 2022).

All the economic indicators of those fleets show in-balance segments and indicate that those fleets are economically viable. The good performances are due to good shrimp prices in 2022.

The GVA of the small beamtrawlers is positive, indicating that the fleet has a value for society, in 2022 it still represented 35% of the total GVA for the Dutch fleet.

Economic and social indicators small beam trawl fleet (in grey) and from the STECF segments in that cluster. ROI: Return on Investment in %, RoFTA: Return on Fixed Tangible Assets in %, CR/BER: current revenue over break-even revenue, NPM: net profit margin in %, Crew Costs/FTE: crew costs per full time equivalent in thousand euro and GVA: gross value

added in million euro. Trend calculated over the last 5 years of data, '-' indicates a non-significant trend at 5%

Fleet	Indicators	2017	2018	2019	2020	2021	2022	trend
Small beamtrawlers	**ROI**	**7.40**	**7.40**	**-0.70**	**2.60**	**3.70**	**6.40***	**-**
TBB_VL1218	ROI	10.60	7.70	11.20	8.50	9.10	9.90*	-
TBB_VL1824	ROI	6.70	7.30	-18.00	-2.00	-6.10	4.30*	-
Small beamtrawlers	**RoFTA**	**32.50**	**36.60**	**-2.60**	**8.70**	**11.70**	**26.20**	**-**
TBB_VL1218	RoFTA	98.90	32.00	138.60	40.70	49.10	76.30	-
TBB_VL1824	RoFTA	27.00	38.40	-20.30	-5.50	-10.30	13.10	-
Small beamtrawlers	**CR/BER**	**1.87**	**1.81**	**1.00**	**1.25**	**1.45**	**2.03**	**-**
TBB_VL1218	CR/BER	4.35	3.14	6.23	3.99	7.70	5.89	-
TBB_VL1824	CR/BER	1.71	1.68	0.64	0.92	0.85	1.57	-
Small beamtrawlers	**NPM**	**16.80**	**15.60**	**0.00**	**6.50**	**9.20**	**16.40**	**-**
TBB_VL1218	NPM	28.70	27.10	33.80	34.30	34.30	44.70	3.57 - increasing
TBB_VL1824	NPM	15.00	13.70	-12.50	-2.40	-4.40	10.00	-
Small beamtrawlers	**Crew Costs/FTE**	**83.40**	**80.60**	**50.60**	**58.40**	**63.50**	**60.70**	**-**
TBB_VL1218	Crew Costs/FTE	62.80	83.10	70.60	84.10	97.50	55.60	-
TBB_VL1824	Crew Costs/FTE	87.70	80.30	46.10	54.70	54.40	61.50	-
Small beamtrawlers	**GVA**	**66.40**	**61.70**	**27.50**	**36.20**	**42.80**	**39.90**	**-**
TBB_VL1218	GVA	10.10	9.70	11.80	11.30	20.40	9.80	-
TBB_VL1824	GVA	56.30	52.00	15.70	24.90	22.30	30.10	-

*due to an inactive fishing right market, the value of rights have been estimated using the RCGECON suggested method. As this method is still under development the outcomes should be regarded as preliminary and treated with caution.,

Large beamtrawlers

The large beamtrawlers consisted of 79 vessels fishing mainly flatfish in 2022, sole and plaice representing 75 % of the value of their landings in 2022. The segment of vessels between 24-40 meter is a heterogeneous group consisting of a number of so-called eurocutters (vessels of around 24 meter and an engine power of 221 kw) and a group of vessels of little less than 40 m and an engine power of 1471 kw. Vessels from this last group are similar to those of the segment of TBB_VL40XX. These segments have been affected by the ban on pulse

trawling since 2021. Many fishers switched to fishing techniques that have a higher fuel consumption than pulse fishing.

All economic indicators for those fleets in 2022 show that despite the higher fuel costs, the fleets are still economically viable. However, the larger beamtrawlers (larger than 40m) show a decreasing trend on all economic indicators, indicating that the situation of the segment is degrading.

The deteriorating economic situation of the fleet has likely played an important role in the choice of fishers to stop their activity and decommission their vessels. As seen above, 39% of the still active vessels of this fleet segment have stopped in 2023.

Economic and social indicators small beam trawl fleet (in grey) and from the STECF segments in that cluster. ROI: Return on Investment in %, RoFTA: Return on Fixed Tangible Assets in %, CR/BER: current revenue over break-even revenue, NPM: net profit margin in %, Crew Costs/FTE: crew costs per full time equivalent in thousand euro and GVA: gross value added in million euro. Trend calculated over the last 5 years of data, '-' indicates a non-significant trend at 5%

Fleet	Indicators	2017	2018	2019	2020	2021	2022	trend
Large beamtrawlers	**ROI**	**10.50**	**10.80**	**9.00**	**5.00**	**5.10**	**2.40***	**-2.07 - decreasing**
TBB_VL2440	ROI	9.60	8.80	-18.60	-26.00	-32.40	0.70*	-
TBB_VL40XX	ROI	10.80	11.10	10.00	7.00	7.30	2.90*	-1.91 - decreasing
Large beamtrawlers	**RoFTA**	**133.90**	**152.80**	**73.50**	**24.40**	**27.30**	**5.50**	**-34.08 - decreasing**
TBB_VL2440	RoFTA	82.60	52.70	-19.00	-25.70	-32.50	2.20	-
TBB_VL40XX	RoFTA	155.10	194.60	107.20	44.90	53.40	6.80	-42.94 - decreasing
Large beamtrawlers	**CR/BER**	**2.70**	**2.36**	**1.73**	**1.25**	**1.31**	**1.18**	**-0.28 - decreasing**
TBB_VL2440	CR/BER	2.28	1.59	0.81	0.72	0.61	1.18	-
TBB_VL40XX	CR/BER	2.84	2.59	1.98	1.42	1.52	1.18	-0.33 - decreasing
Large beamtrawlers	**NPM**	**23.50**	**19.30**	**11.30**	**4.70**	**4.90**	**2.20**	**-4.06 - decreasing**
TBB_VL2440	NPM	20.80	10.60	-4.10	-7.10	-8.60	2.70	-
TBB_VL40XX	NPM	24.20	21.30	14.20	7.20	7.50	2.10	-4.51 - decreasing
Large beamtrawlers	**Crew Costs/FTE**	**89.00**	**90.50**	**68.70**	**64.70**	**59.10**	**49.00**	**-9.26 - decreasing**
TBB_VL2440	Crew Costs/FTE	88.70	76.60	57.50	53.70	49.00	48.50	-6.47 - decreasing
TBB_VL40XX	Crew Costs/FTE	89.10	95.00	71.60	68.20	62.30	49.20	-10.09 - decreasing
Large beamtrawlers	**GVA**	**99.60**	**88.40**	**58.60**	**42.90**	**38.10**	**23.70**	**-14.99 - decreasing**

Fleet	Indicators	2017	2018	2019	2020	2021	2022	trend
TBB_VL2440	GVA	20.10	14.60	6.30	6.10	4.70	5.10	-
TBB_VL40XX	GVA	79.50	73.80	52.30	36.70	33.40	18.60	-12.93 - decreasing

*due to an inactive fishing right market, the value of rights have been estimated using the RCGECON suggested method. As this method is still under development the outcomes should be regarded as preliminary and treated with caution.,

Demersal trawlers

The demersal trawl fleet segments consist of 35 vessels in 2022. These segments consisted of vessels using twin trawls, multirig trawls and flyshoot fishery, targeting various species such as surmullet, squid, plaice and nephrops (those four species make up for about 66% of the value of landings in 2022). The segment of 24-40 meter also includes one vessel which is larger than 40 meters.

Most of the indicators of this fleets show that they are in balance with no clear trend. The slightly negative ROI for the larger demersal trawlers comes with a disclaimer that the calculation of the ROI is theoretical, not based on actual value of fishing rights.

Economic and social indicators demersal fleet (in grey) and from the STECF segments in that cluster. ROI: Return on Investment in %, RoFTA: Return on Fixed Tangible Assets in %, CR/BER: current revenue over break-even revenue, NPM: net profit margin in %, Crew Costs/FTE: crew costs per full time equivalent in thousand euro and GVA: gross value added in million euro. Trend calculated over the last 5 years of data, '-' indicates a non-significant trend at 5%

Fleet	Indicators	2017	2018	2019	2020	2021	2022	trend
Demersal trawlers	**ROI**	**6.90**	**4.60**	**0.30**	**-5.80**	**-3.40**	**0.50***	**-**
DTS_VL1824	ROI	-2.20	0.20	-3.30	-2.80	-1.20	6.20*	-
DTS_VL2440	ROI	7.90	5.00	1.30	-6.50	-3.80	-0.70*	-
Demersal trawlers	**RoFTA**	**33.80**	**14.80**	**2.40**	**-8.00**	**-5.80**	**5.50**	**-**
DTS_VL1824	RoFTA	-3.00	0.40	-4.40	-4.00	-2.10	18.70	-
DTS_VL2440	RoFTA	45.60	17.30	5.80	-9.40	-6.60	2.90	-
Demersal trawlers	**CR/BER**	**1.59**	**1.41**	**1.13**	**0.84**	**0.94**	**1.35**	**-**
DTS_VL1824	CR/BER	0.96	1.05	0.92	0.87	1.04	2.55	-
DTS_VL2440	CR/BER	1.80	1.46	1.18	0.84	0.93	1.26	-
Demersal trawlers	**NPM**	**13.80**	**9.00**	**2.90**	**-4.70**	**-1.60**	**6.40**	**-**
DTS_VL1824	NPM	-1.50	1.40	-1.80	-3.60	0.90	16.70	-
DTS_VL2440	NPM	16.40	9.70	4.00	-4.80	-1.90	5.00	-
Demersal trawlers	**Crew Costs/FTE**	**86.20**	**81.10**	**67.50**	**63.30**	**57.20**	**65.90**	**-**
DTS_VL1824	Crew Costs/FTE	86.20	88.40	55.70	56.40	54.80	60.00	-
DTS_VL2440	Crew Costs/FTE	86.20	80.30	71.30	64.60	57.60	66.80	-

Fleet	Indicators	2017	2018	2019	2020	2021	2022	trend
Demersal trawlers	**GVA**	**24.70**	**21.20**	**20.20**	**16.60**	**16.20**	**17.00**	**-**
DTS_VL1824	GVA	2.90	1.80	3.50	2.30	1.90	2.30	-
DTS_VL2440	GVA	21.90	19.40	16.70	14.40	14.30	14.70	-

*due to an inactive fishing right market, the value of rights have been estimated using the RCGECON suggested method. As this method is still under development the outcomes should be regarded as preliminary and treated with caution.,

Pelagic fleet

At the end of 2022, the pelagic fleet consisted of 8 vessels in targeting pelagic species on large trawlers. In 2022, the four main species (herring, blue whiting, mackerel and horse mackerel) amounted for 81% of the revenue of the fleet.

The revenue of this fleet has been corrected for all years in 2021 due to the realisation that there was a mistake in what revenue was included for one of the fishing companies (out of three companies).

The pelagic fleet has sustained a calculated loss every year in the past with negative gross profits. Because the pelagic fleet is vertically integrated in companies the calculated losses do not mean that the sector is unprofitable: the prices used to calculate revenue are internally applied transfer prices provided by the fishing companies as the fish is not sold in auction but transformed and traded directly by the companies.

In 2022, the fleet is out-of-balance according to the ROI and RoFTA indicators and shows insufficient NPM while the CR/BER is still above one. This strong deterioration compared to the previous year is due to the high fuel prices. The pelagic vessels are large and spend an important proportion of their time steaming while searching the schools of fish.

Economic and social indicators pelagic fleet (in grey). ROI: Return on Investment in %, RoFTA: Return on Fixed Tangible Assets in %, CR/BER: current revenue over break-even revenue, NPM: net profit margin in %, Crew Costs/FTE: crew costs per full time equivalent in thousand euro and GVA: gross value added in million euro. Trend calculated over the last 5 years of data, '-' indicates a non-significant trend at 5%

Fleet	Indicators	2017	2018	2019	2020	2021	2022	trend
Pelagic trawlers	**ROI**	**1.00***	**2.9**	**2.20***	**5.60**	**4.30***	**-7.0**	**-**
TM_VL40XX	ROI	1.00	2.9*	2.20	5.60*	4.30	-7.0*	-
Pelagic trawlers	**RoFTA**	**3.40**	**6.5**	**5.20**	**16.70**	**10.40**	**-7.5**	**-**
TM_VL40XX	RoFTA	3.40	6.5	5.20	16.70	10.40	-7.5	-
Pelagic trawlers	**CR/BER**	**1.18**	**1.4**	**1.53**	**1.94**	**1.83**	**1.2**	**-**
TM_VL40XX	CR/BER	1.18	1.4	1.53	1.94	1.83	1.2	-
Pelagic trawlers	**NPM**	**4.40**	**8.0**	**8.70**	**17.40**	**13.70**	**1.9**	**-**
TM_VL40XX	NPM	4.40	8.0	8.70	17.40	13.70	1.9	-
Pelagic trawlers	**Crew Costs/FTE**	**90.50**	**94.4**	**98.50**	**108.00**	**105.10**	**100.7**	**-**
TM_VL40XX	Crew Costs/FTE	90.50	94.4	98.50	108.00	105.10	100.7	-
Pelagic trawlers	**GVA**	**54.70**	**57.5**	**47.10**	**55.10**	**50.90**	**30.8**	**-**

Fleet	Indicators	2017	2018	2019	2020	2021	2022	trend
TM_VL40XX	GVA	54.70	57.5	47.10	55.10	50.90	30.8	-

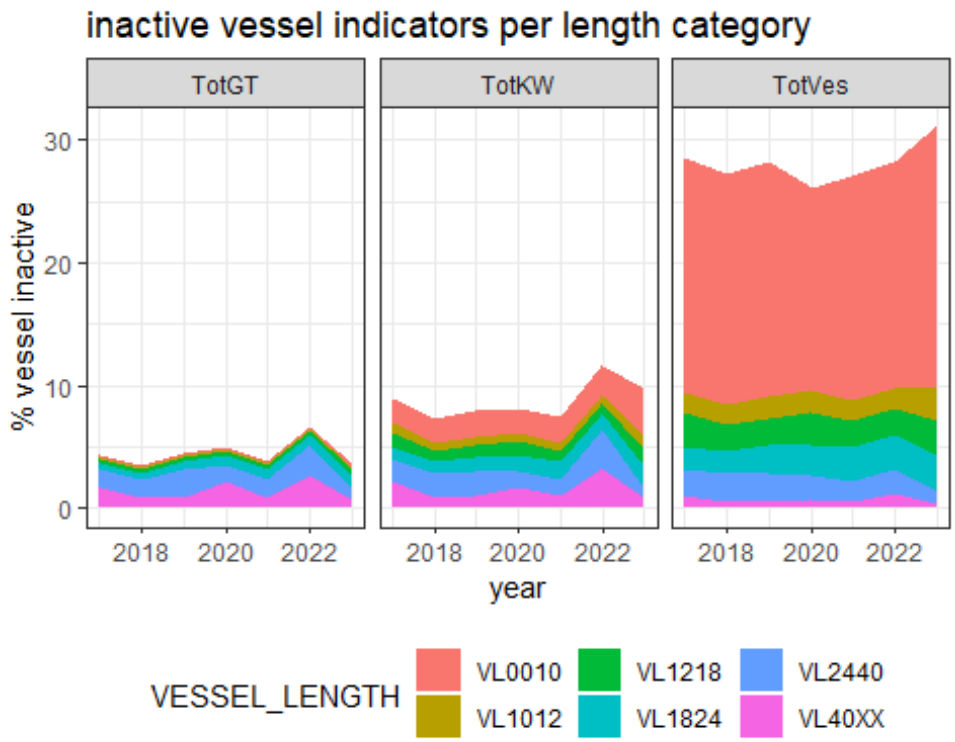
[*]*due to an inactive fishing right market, the value of rights have been estimated using the RCGECON suggested method., As this method is still under development the outcomes should be regarded as preliminary and treated with caution.,.

Technical indicators

Inactive vessel indicator

Following the method used by STECF, the inactive vessel indicator is calculated for all vessel length categories as the ratio inactive over the total fleet. Three indicators of capacity utilization are calculated, using the number of vessels (TotVes), the engine power (TotkW) and the gross tonnage (TotGT). While the inactivity of the Dutch fleet lays below 10% in terms of gross tonnage and engine power, the large number of small inactive vessels brings the total inactive vessel percentage above the 20% threshold. This is mainly due to the relatively large amount to small inactive vessels (approx. 19% of the fleet total) which contribute less than 1% to the total tonnage of the fleet. The inactivity percentage of the categories <10m, 12-18m and 18-24m has been growing over time. Some of those small vessels are kept to store fishing rights but are not actually used to fish.

The larger vessel categories' contribution to the inactivity percentage is small due to the low number of large vessels in the fishery (Table 1). Over the whole period the inactivity for the large vessels decreasedThe increase in larger inactive vessels in 2022 has been partly caused by vessels that stopped fishing awaiting the decommissioning scheme in 2023. These numbers have dropped in 2023.



Percentage inactive per vessel length category in terms of vessel number, KW and tonnage.

Indicator	Vessel length	2017	2018	2019	2020	2021	2022	2023
TotGT	VL0010	0.21	0.20	0.23	0.19	0.23	0.24	0.30
	VL1012	0.11	0.09	0.11	0.11	0.11	0.11	0.21
	VL1218	0.35	0.25	0.30	0.40	0.30	0.29	0.44
	VL1824	0.53	0.50	0.69	0.87	0.86	0.89	1.06
	VL2440	1.56	1.61	2.27	1.29	1.40	2.39	0.82
	VL40XX	1.63	0.80	0.89	2.16	0.93	2.74	0.75
TotKW	VL0010	2.06	1.93	2.16	1.89	2.21	2.46	3.72
	VL1012	0.83	0.61	0.72	0.73	0.71	0.66	1.25
	VL1218	1.15	0.91	0.97	1.21	0.82	0.83	1.21
	VL1824	0.97	0.92	1.16	1.27	1.42	1.42	1.78
	VL2440	1.86	1.94	2.03	1.32	1.38	3.05	0.91
	VL40XX	2.12	0.91	0.95	1.67	0.96	3.20	0.83
TotVes	VL0010	19.11	18.77	19.02	16.62	18.26	18.49	21.47
	VL1012	1.76	1.64	1.92	1.80	1.80	1.68	2.65
	VL1218	2.71	2.19	2.05	2.63	2.07	2.10	2.79
	VL1824	1.76	1.78	2.33	2.49	2.77	2.80	2.94
	VL2440	2.17	2.33	2.33	1.94	1.66	2.10	0.88
	VL40XX	1.08	0.55	0.55	0.69	0.55	1.12	0.44

Vessel Utilization Ratio

Looking at the utilisation of the active fleet in terms of fishing effort:

- the small scale vessels are largely underutilised, about 20% of the days at sea over the maximum observed effort (max observed days in based on average days at sea of 10 most active vessels). Which comes from very heterogeneous levels of effort in the fishery (note that days at sea are real 24h days so for small scale fleets with day trips 3 x 8 hours trip would make a day). The maximum number of days at sea observed has also sharply declined since 2016 (from 143 down to 46 days at sea in 2021, this is partly due to the fact that the dredgers are now in the TBB 12-18 fleet).

- The smaller beam trawlers also have very heterogeneous levels of activity in the fleet and are utilised at about 60% of the KW-days (68% in 2021). This is mainly due to the seasonality of the shrimping activity.

- The large beam trawls are utilized at around 70% for all years. The slight decrease in utilisation in the most recent years is due to the increasing trend in the maximum number of days at sea observed for this fleet. From 222 in 2008 up to 309 days in 2018 and 298 in 2021, the most active vessels are now fishing continuously (7 days fishing trips with alternating crews) and are longer at sea than the pelagic trawlers.

- The utilisation for the segments using demersal trawls remains high at 78% of the max seadays while the max number of seadays also increased.

- The average number of seadays of the pelagic fleet has gone down in 2023? (see max seadays).

Maximum observed sea days per fleet, based on average days at sea of 10 most active vessels.

Indicator	Fleet	2017	2018	2019	2020	2021	2022	2023	trend
MAX_DAYS	Small coastal	115	75	45	57	46	49	46	-9.21 - decreasing
	DFN_VL1824	27	32	35	57	42	49	43	-
	PG_VL0010	115	75	45	49	46	43	46	-9.64 - decreasing
	PG_VL1012	34	25	19	17	16	20	14	-2.61 - decreasing
	TBB_VL0010	24	13	7	11	11	14	19	-
	Small beamtrawlers	210	204	192	198	198	195	178	-3.86 - decreasing
	TBB_VL1218	119	115	93	102	114	112	126	-
	TBB_VL1824	210	204	192	198	198	195	178	-3.86 - decreasing
	Large beamtrawlers	286	309	292	297	298	252	255	-
	TBB_VL2440	211	205	198	192	194	182	158	-7.46 - decreasing
	TBB_VL40XX	286	309	292	297	298	252	255	-
	Demersal trawlers	213	223	246	236	240	207	198	-
	DTS_VL1824	156	165	174	164	162	184	159	-
	DTS_VL2440	213	223	246	236	240	207	198	-
	Pelagic trawlers	257	235	230	263	212	222	190	-
	TM_VL40XX	257	235	230	263	212	222	190	-

Vessel utilization ratio as a proportion of seadays, gtdays and kWdays over maximum observed sea days. Trend calculated over the last 6 years of data, '-' indicates a non-significant trend at 5%

Indicator	Fleet	2017	2018	2019	2020	2021	2022	2023	trend
observeddays	Small coastal	0.16	0.18	0.26	0.20	0.23	**0.22**	0.23	-
	DFN_VL1824	0.74	0.62	0.62	0.68	0.59	**0.58**	0.60	-
	PG_VL0010	0.17	0.17	0.25	0.19	0.21	**0.21**	0.19	-
	PG_VL1012	0.63	0.62	0.64	0.65	0.59	**0.57**	0.80	-
	TBB_VL0010	0.41	0.59	0.73	0.68	0.60	**0.48**	0.48	-
	Small beamtrawlers	0.58	0.57	0.46	0.57	0.60	**0.57**	0.56	-
	TBB_VL1218	0.57	0.52	0.52	0.64	0.52	**0.44**	0.45	-
	TBB_VL1824	0.62	0.61	0.50	0.60	0.65	**0.64**	0.62	-
	Large beamtrawlers	0.70	0.65	0.65	0.65	0.64	**0.62**	0.65	-
	TBB_VL2440	0.82	0.77	0.72	0.79	0.76	0.73	0.86	-

Indicator	Fleet	2017	2018	2019	2020	2021	2022	2023	trend
	TBB_VL40XX	0.74	0.71	0.72	0.72	0.71	**0.65**	0.69	-
	Demersal trawlers	0.83	0.83	0.70	0.76	0.78	0.89	0.82	-
	DTS_VL1824	1.12	1.00	0.90	1.02	1.14	1.00	1.00	-
	DTS_VL2440	0.83	0.84	0.73	0.78	0.79	0.89	0.83	-
	Pelagic trawlers	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0 - no trend
	TM_VL40XX	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0 - no trend
observedgt	Small coastal	0.47	0.73	0.79	2.55	0.76	0.74	0.67	-
	DFN_VL1824	0.70	0.60	0.57	2.47	0.57	**0.61**	0.53	-
	PG_VL0010	0.16	0.16	0.23	0.17	0.20	**0.20**	0.18	-
	PG_VL1012	0.62	0.56	0.61	0.62	0.57	**0.55**	0.74	-
	TBB_VL0010	0.50	0.56	0.93	0.75	0.68	0.71	0.90	-
	Small beamtrawlers	0.69	0.69	0.59	0.66	0.75	0.74	0.76	-
	TBB_VL1218	0.77	0.81	0.78	0.76	0.70	**0.64**	0.54	-0.04 - no trend
	TBB_VL1824	0.61	0.60	0.50	0.58	0.63	**0.62**	0.60	-
	Large beamtrawlers	0.75	0.71	0.71	0.71	0.70	**0.64**	0.67	-0.01 - no trend
	TBB_VL2440	0.79	0.72	0.73	0.77	0.75	**0.65**	0.79	-
	TBB_VL40XX	0.63	0.61	0.62	0.61	0.61	**0.56**	0.59	-0.01 - no trend
	Demersal trawlers	0.81	0.80	0.76	0.78	0.77	0.84	0.83	-
	DTS_VL1824	0.99	0.89	0.81	0.90	1.01	0.88	0.94	-
	DTS_VL2440	0.71	0.74	0.63	0.70	0.70	0.76	0.72	-
	Pelagic trawlers	0.80	0.79	0.82	0.81	0.90	0.85	0.88	0.02 - no trend
	TM_VL40XX	0.80	0.79	0.82	0.81	0.90	0.85	0.88	0.02 - no trend
observedkw	Small coastal	0.19	0.24	0.38	0.53	0.38	**0.40**	0.35	-
	DFN_VL1824	0.59	0.51	0.51	1.36	0.55	**0.51**	0.55	-
	PG_VL0010	0.14	0.18	0.27	0.22	0.24	**0.24**	0.19	-
	PG_VL1012	0.44	0.42	0.40	0.46	0.52	**0.40**	0.56	-
	TBB_VL0010	0.66	0.71	1.07	0.92	0.67	0.77	0.65	-
	Small beamtrawlers	0.64	0.64	0.53	0.62	0.68	**0.68**	0.69	-
	TBB_VL1218	0.70	0.66	0.64	0.66	0.62	**0.56**	0.48	-0.03 - no trend
	TBB_VL1824	0.57	0.56	0.45	0.55	0.59	**0.58**	0.56	-
	Large beamtrawlers	0.77	0.73	0.73	0.73	0.71	**0.65**	0.68	-0.02 - no trend
	TBB_VL2440	0.79	0.72	0.74	0.78	0.75	**0.66**	0.81	-
	TBB_VL40XX	0.63	0.60	0.61	0.60	0.60	**0.56**	0.59	-0.01 - no trend

Indicator	Fleet	2017	2018	2019	2020	2021	2022	2023	trend
	Demersal trawlers	0.79	0.78	0.76	0.75	0.74	0.83	0.81	-
	DTS_VL1824	0.99	0.89	0.81	0.90	1.01	0.88	0.90	-
	DTS_VL2440	0.69	0.72	0.63	0.67	0.67	0.75	0.71	-
	Pelagic trawlers	0.80	0.79	0.82	0.80	0.88	0.84	0.87	0.01 - no trend
	TM_VL40XX	0.80	0.79	0.82	0.80	0.88	0.84	0.87	0.01 - no trend

References

Beukhof, E., and K. G. Hamon. 2020. “Indicators of the Balance Between Fleet Capacity and Fishing Opportunities: Discrepancies Between the Dutch National Fleet Report and STECF.” IJmuiden: Wageningen Marine Research. https://doi.org/10.18174/521470.

The table below presents a summary of the indicators (ecological and economical) described in this report. As indicated in the last column there are 4 segments out of balance. For the segments where an * is added this perceived imbalance is due to the characteristics of the Northsea sole stock prior to the latest benchmark in 2024. The consequences of the benchmark are to that extent that an Action Plan will not be necessary. The imbalance for the pelagic fleet are mainly due to the stock management of the Atlantic Mackerel, Blue Whiting and Atlanto Scandian herring. The negotiations between the Coastal States on the stock management are still continuing and pending these negotiations an Action Plan will not be initiated.

Fleet	Number of vessels	SHI	SHI Trend (2018-2022)	SAR	ROI	ROI trend	RoFTA	RoFTA trend	CR/BER	CR/BER trend	NPM	NPM trend	VUR	VUR trend	Balance?
Small scale and coastal	**216**	**0.63**		0	**2.00***	-	**4,6**	-	**4,26**	-	**38,8**	-	**0,22**	-	
PG-VL0010	156	0.60	-0.04	0	4.10*	-	9,4	-	10,97	-	51,2	-	**0,21**	-	Yes
PG-VL1012	20	0.70	-0.42	1	6.20*	-	18,5	-	15,87	-	52,8	-	**0,57**	-	No*
DFN-VL1824	18	-	-	0	-1.50*	-	-2,1	-	1,59	-	21	-	**0,58**	-	?
TBB-VL0010	22	-	-	0	-11.90*	-	-8,8	-	1,25	-	1,5	-	**0,48**	-	?
Small beam trawlers	**174**	**0.71**		0	**6.40***	-	**26,2**	-	**2,03**	-	**16,4**	-	**0,57**	-	
TBB-VL1218	30	-	-	0	9.90*	-	76,3	-	5,89	-	44,7	3.57 - increasing	**0,44**	-	Yes
TBB-VL1824	144	-	-	0	4.30*	-	13,1	-	1,57	-	10	-	**0,64**	-	Yes
Large beam trawlers	**79**	**0.69**		1	**2.40***	**-2.07 - decreasing**	**5,5**	**-34.08 - decreasing**	**1,18**	**-0.28 - decreasing**	**2,2**	**-4.06 - decreasing**	**0,62**	-	
TBB-VL2440	22	0.69	-0.34	1	0.70*	-	2,2	-	1,18	-	2,7	-	0,73	-	No*
TBB-VL40XX	57	0.69	-0.34	1	2.90*	-1.91 - decreasing	6,8	-42.94 - decreasing	1,18	-0.33 - decreasing	2,1	-4.51 - decreasing	**0,65**	-	No*
Demersal trawlers	**35**	**0.81**		0	**0.50***	-	**5,5**	-	**1,35**	-	**6,4**	-	0,89	-	
DTS-VL1824	6	-	-	0	6.20*	-	18,7	-	2,55	-	16,7	-	1	-	Yes
DTS-VL2440	29	-	-	0	-0.70*	-	2,9	-	1,26	-	5	-	0,89	-	Yes
Pelagic	**8**	**1.01**		1	**-7**	-	**-7,5**	-	**1,2**	-	**1,9**	-	1	no trend	
TM-VL40XX	8	1.01	0.01	1	-7.0*	-	-7,5	-	1,2	-	1,9	-	1	no trend	No