POLAND

Annual report on Poland's efforts to achieve a sustainable balance between fishing capacity and fishing opportunities for 1 January to 31 December 2018

Introduction

Pursuant to Article 22(2) of Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC ('Regulation (EU) No 1380/2013'), EU Member States are required to send to the European Commission, by 31 May each year, a report on the balance between the fishing capacity of their fleets and their fishing opportunities.

I. SUMMARY OF REPORT

As at 31 December 2018, the Polish fishing fleet consisted of 827 fishing vessels (including vessels fishing in the Vistula Lagoon and Szczecin Lagoon). The total fishing capacity of those vessels was 32 350.07 GT and 80 226.78 kW. In general terms, Polish fishing can be broken down into two basic sectors: Baltic Sea fishing (in which the lion's share of the fleet is involved) and deep-sea fishing.

The main fish species caught by Polish fishermen in the Baltic Sea are: cod, sprat, herring, salmon, sea trout and flatfish. The main species caught by Polish deep-sea vessels are: horse mackerel, cod, blue whiting, saithe, hake, haddock and mackerel.

Since its accession to the European Union, Poland has strictly complied with the entry/exit scheme for fishing vessels as currently provided for in Article 23(1) of Regulation (EU) No 1380/2013.

II. Opinion on the balance between fleet capacity and resources

Given the status of marine biological resources and the fishing opportunities available to Poland in the Baltic Sea, the existing fleet structure must be changed.

Between its accession to the European Union and the end of 2013, Poland reduced its fishing capacity by more than 40%.

As the findings of the annual reports for 2014, 2015, 2016 and 2017 showed that the fishing capacity of individual fleet segments was not in balance with available fishing opportunities, corrective action was taken to achieve such a balance. That action covered the relevant segments of the fishing fleet in the form of support for permanent cessation of fishing activity as referred to in Article 34 of Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund and repealing Council Regulations (EC) No 2328/2003, (EC) No 861/2006, (EC) No 1198/2006 and (EC) No 791/2007 and Regulation (EU) No 1255/2011 of the European Parliament and of the Council (OJ L 149, 20.5.2014, p. 1) – implemented under Measure 1.6 'Permanent cessation of fishing activity of the 2014-20 'Fisheries and the Sea' Operational Programme (2014-20 FISH OP)'. Action also took the form of support for temporary cessation of fishing activity as referred to in

in Article 33 of Regulation (EU) No 508/2014 – implemented under Measure 1.10 ‘Temporary cessation of fishing activity (2014-20 FISH OP)’.

Pursuant to Article 34(4) of Regulation (EU) No 508/2014, support under Measure 1.6 ‘Permanent cessation of fishing activity’ may be granted until 31 December 2017. In view of the above, agreements for financing scrapping operations or operations for re-qualifying fishing vessels under the above-mentioned measures were concluded by the end of 2017. No agreements for financing operations under Measure 1.6. ‘Permanent cessation of fishing activity’ were concluded after that time.

In implementing the financing agreements under Measure 1.6. ‘Permanent cessation of fishing activity’, between 1 January 2016 and 6 March 2018, 46 commercial fishing vessels were permanently withdrawn from commercial fishing, representing a total fishing capacity of **1 069.65 GT** and **3 355.00 kW**:

- between 1 January 2016 and 31 December 2016 **33** fishing vessels with a total fishing capacity of 865.24 GT and 2 699.20 kW were permanently withdrawn from commercial fishing, of which 29 vessels were permanently withdrawn by scrapping, two vessels were withdrawn without scrapping through reclassification for land-based non-profit-making activities related to cultural heritage, and two vessels were withdrawn without scrapping through reclassification for non-profit-making activities other than commercial fishing;

- between 1 January 2017 and 31 December 2017 **8** fishing vessels with a total fishing capacity of 166.78 GT and 505.00 kW were permanently withdrawn from commercial fishing, of which six vessels were permanently withdrawn by scrapping and two vessels were withdrawn without scrapping through reclassification for non-profit-making activities other than commercial fishing:

- between 1 January 2018 and 6 March 2018 **5** fishing vessels with a total fishing capacity of 37.63 GT and 150.80 kW were permanently withdrawn from commercial fishing, of which two vessels were permanently withdrawn by scrapping and three vessels were withdrawn without scrapping through reclassification for non-profit-making activities other than commercial fishing.

Measure 1.6. Permanent cessation of fishing activities under the 2014-20 FISH OP

	2016	2017	2018	2016 - 2018
Fishing vessels permanently withdrawn through scrapping	29	6	2	37
Fishing vessels permanently withdrawn without scrapping through reclassification for land-based non-profit-making activities related to cultural heritage	2	0	0	2
Fishing vessels permanently withdrawn without scrapping through reclassification for non-profit-making activities other than commercial fishing	2	2	3	7
Total number of fishing vessels permanently withdrawn	**33**	**8**	**5**	**46**

Notwithstanding the above, given the negative, dynamic changes in the status of fish stocks in the Baltic Sea and continuing uncertainty in the scientific guidance from the International Council for the Exploration of the Sea (ICES), in particular as regards eastern Baltic cod – which is important to the Polish fishing sector – there is a temporary imbalance

between fishing capacity and available fish stocks.

The latest assessments of the biological, technical and economic indicators relating to the Polish fishing fleet, which are presented in Chapter VIII, Section F: ‘Estimation and discussion of balance indicators’ and Chapter IX: ‘Analysis and evaluation of the balance between fishing capacity and fishing opportunities by fleet segment for three consecutive years’ of this report show that individual segments of the fishing fleet have still not adjusted effectively to available fishing opportunities.

Pursuant to Article 22(4) of Regulation (EU) No 1380/2013, an action plan has been prepared for the fleet segments with identified structural overcapacity. The action plan forms an integral part of this report and is included in Chapter X.

III. SECTION A

Description of the fishing fleet

In general terms, Polish fishing can be broken down into two basic sectors:

- **Baltic Sea fishing** (in which the lion's share of the fleet is involved);
- **deep-sea fishing**.

As at 31 December 2018, the Polish Baltic fishing fleet consisted of 825 fishing vessels. The total fishing capacity of those vessels was 15 947.07 GT and 62 826.78 kW. The fleet is made up of fishing vessels operating in the Baltic Sea and in internal maritime waters, including the Vistula Lagoon and the Szczecin Lagoon.

As at 31 December 2018, the Polish deep-sea fishing fleet consisted of 2 fishing vessels. The total fishing capacity of those vessels was 16 403.00 GT and 17 400.00 kW. The deep-sea fleet is made up of fishing vessels operating exclusively outside the Baltic Sea and Polish internal waters.

Types of fishing operations carried out

Baltic Sea fisheries

The main fish species caught by Polish fishermen in the Baltic Sea are: cod, sprat, herring, salmon, sea trout and flatfish. The Baltic Sea species important to Polish fishermen (in particular the coastal fleet) is cod which is subject to restrictions resulting, inter alia, from the recovery plan for these stocks (significant annual reductions in fishing quotas, biological recovery periods and restricted use of some fishing gear). Catches of pelagic fish (sprat and herring) make up a significant share of the income of Polish fishermen. Polish fishermen also fish for sea trout and flatfish, considered equally valuable in economic terms. Baltic Sea catches in 2018 as broken down by species: cod (sub-areas 22-32): 6 759.50 tonnes, salmon: 8 805 units, sprat: 74 150.70 tonnes, plaice: 736 tonnes, western herring (sub-areas 22-24): 1 735.90 tonnes, central herring (sub-areas 25-27, 28.2, 29 and 32): 49 537.50 tonnes, sea trout: 58 117 units and flounder: 15 473 tonnes.

Deep-sea fisheries

Deep-sea vessels operated mainly in areas managed by the North-East Atlantic Fisheries Commission (NEAFC) and in Norwegian waters. In 2018, Polish vessels also fished in African waters under the jurisdiction of the Republic of Namibia. The main species caught by Polish deep-sea vessels in NEAFC fisheries are: cod, blue whiting, haddock, saithe, redfish and halibut. The main species harvested in West African fisheries are: mackerel, horse mackerel, European hake, dentex and snoek. The deep-sea quotas allocated to Poland have been fully utilised, either through catch or by exchanging quotas – primarily with Germany, the United Kingdom, Latvia, Estonia, Spain and Portugal. The Polish deep-sea fleet's growth prospects depend on its ability to obtain fishing opportunities in deep-sea fisheries. In 2018, deep-sea catches amounted to a total of approx. 49.6 thousand tonnes.

Changes in the fleet

Changes in the Polish fleet, as broken down into Baltic and deep-sea fleets, are presented in the table below.

	As at 31 December 2017			As at 31 December 2018			Change		
	GT	kW	Number of vessels	GT	kW	Number of vessels	GT	kW	Number of vessels
Total	**27 559.30**	**76 286.58**	**834**	**32 350.07**	**80 226.8**	**827**	**+ 4 790.7**	**+ 3 940.0**	**- 7**
Deep-sea fleet	11 580.56	13 716.00	3	16 403.00	17 400.0	2	+ 4 822.4	+ 3 684.0	- 1
Baltic fleet	15 978.74	62 570.58	831	15 947.07	62 826.78	825	- 31.67	+ 256.20	- 6

In 2018, the fishing fleet was modernised, which involved rebuilding fishing vessels (increasing or decreasing gross tonnage), changing the engine power of the main fishing vessels (increasing or decreasing power) and replacing engines. Fishing vessels were modernised by their owners by means of their own financial resources and the individual fishing capacity available to them. At the same time, none of the modernisation was carried out using the additional fishing capacity granted by the minister responsible for fisheries.

In 2018, **one** fishing vessel was withdrawn from commercial fishing without state aid. The individual fishing capacity which remained following the withdrawal of the vessel was used in full to modernise another fishing vessel which was entered into the fleet register.

That same year, cases were identified of vessel owners exchanging vessels, whereby ships entered in the register were withdrawn from commercial fishing (without state aid) and replaced by other fishing vessels (a newly built vessel and a vessel imported from another Member State). Vessels were exchanged – as referred to above – by their owners by means of their own financial resources and the individual fishing capacity available to them.

Following the implementation of Measure 1.6. 'Permanent cessation of fishing activity' under the 2014-20 'Fisheries and the Sea' Operational Programme, **five** fishing vessels with a total fishing capacity of 37.63 GT and 150.80 kW were withdrawn from commercial fishing between 1 January and 6 March 2018.

As at 31 December 2018, the deep-sea fleet comprised two fishing vessels, one less than in the previous year. Of the three deep-sea fishing vessels included in the register as at 31 December 2017, two fishing vessels were withdrawn from commercial fishing without state aid in 2018. The total fishing capacity of those vessels was 9 232.56 GT and 10 716 kW. At the same time, one fishing vessel with a fishing capacity of 14 055 GT and 14 400 kW was entered into the register in 2018. As at 31 December 2018, the Polish deep-sea fishing fleet consisted of **2** fishing vessels.

IV. SECTION B

Impact on fishing capacity of effort reduction schemes

As a result of the implementation of Measure 1.6. 'Permanent cessation of fishing activity' under the 2014-20 FISH OP, which began in 2016, a total of 46 fishing vessels with a total fishing capacity of 1069.65 GT and 3355.00 kW had been permanently withdrawn from commercial fishing as at 6 March 2018.

V. SECTION C

Statement of compliance with the entry/exit scheme and with the fishing capacity ceiling

During the reporting period, Poland strictly complied with the entry/exit scheme as set out in Article 23(1) of Regulation (EU) No 1380/2013.

As at 31 December 2018, the fishing capacity of the Polish fleet included in the fleet register was 32 350.07 GT and 80 226.78 kW.

Pursuant to Article 22(7) of Regulation (EU) No 1380/2013, the fishing capacity of the Polish fleet, as specified in the fleet register, did not at any time exceed the fishing capacity ceiling set out for Poland in Annex II to that Regulation.

VI. SECTION D

Summary of weaknesses and strengths of the fleet management system
Plan for improvements in the fleet management system
Information on the level of compliance with fleet policy instruments

Poland has fully complied with the fleet capacity restrictions provided for in EU law on balancing entry and exit capacity. The fishing capacity of the Polish fleet, as specified in the fleet register, did not at any time exceed the fishing capacity ceiling laid down for Poland in Annex II to Regulation (EU) No 1380/2013.

A key feature of the existing management system of the Polish fishing fleet is that it incorporates a complex IT system. The IT system consists of a central database containing information necessary for the fisheries administration system to function properly and be used to monitor fishing activity. The system takes into account links between vessel registration procedures, procedures for granting fishing licences and permits, and catch registration and accounting procedures. It has a statistical mechanism which enables a comprehensive set of reports to be generated. In addition, the system has a module for entering electronic reports into the databases, which are submitted in accordance with Council Regulation (EC) No 1224/2009[1] and Commission Implementing Regulation (EU) No 404/2011[2]. The system was designed using the latest IT technology which, among other things, means it is able to operate more functionally, faster and can be accessed by all authorised users via the internet. A new 'infringements module' was added to the existing system in 2015 to allow users to record any infringements committed by Polish fishing vessels and document all stages of relevant administrative procedures.

Vtrack – a modern satellite fishing vessel monitoring system – became fully operational in 2009 and was functioning properly in 2018.

[1] Council Regulation (EEC) No 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy, amending Regulations (EC) No 847/96, (EC) No 2371/2002, (EC) No 811/2004, (EC) No 768/2005, (EC) No 2115/2005, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007, (EC) No 676/2007, (EC) No 1098/2007, (EC) No 1300/2008, (EC) No 1342/2008 and repealing Regulations (EEC) No 2847/93, (EC) No 1627/94 and (EC) No 1966/2006 (OJ L 343, 22.12.2009, p. 1, as amended).

[2] Commission Implementing Regulation (EU) No 404/2011 of 8 April 2011 laying down detailed rules for the implementation of Council Regulation (EC) No 1224/2009 establishing a Community control system for ensuring compliance with the rules of the Common Fisheries Policy (OJ L 112, 30.4.2011, p. 1-153).

ERS-Vcatch, an electronic recording and reporting system allowing fishing and landing documents in accordance with Council Regulation (EC) No 1224/2009 and Commission Implementing Regulation (EU) No 404/2011 to be filed electronically, was deployed in January 2011. All Polish vessels over 12 metres in overall length have been equipped so that fishing activity and landing declarations/transshipment data can be registered and reported electronically. In 2018, all catch taken by those vessels was recorded using electronic logbooks.

The automatic SMS-based system for advance registration deployed in 2011 was functioning properly in 2018. Data transmitted from fishing vessels were automatically – in real time – recorded in a single database, which could be accessed by inspectors via the internet.

A balance between fishing capacity and available marine biological resources must be achieved in order to ensure effective fleet management. Adapting the size and structure of the fleet to the fishing opportunities available to Poland will therefore be crucial in the near future. The management rules for both areas which have so far been based on provisions resulting directly from EU law and the 2004 Act have been modified and enhanced in the new Sea Fisheries Act of 19 December 2014, in force since 4 March 2015.

Under those rules, the minister responsible for fisheries is empowered to manage fishing capacity with a view to making efficient use of the fishing capacity ceiling allocated to Poland (GT/kW), which, due to its progressively decreasing size, should be linked – whenever possible – to vessels actively involved in commercial fishing. The provisions indicate that:

- three fleet segments will be designated by area of operation (fleet segments comprising vessels used in commercial fishing in the Baltic Sea, Vistula Lagoon/Szczecin Lagoon and deep sea areas):
- the vessel owner will lose the right to individual fishing capacity after three years from the date of last landing of the marine organisms caught by the fishing vessel, i.e. withdrawal from commercial fishing;
- the minister responsible for fisheries will establish how spare fishing capacity is managed, including through support measures for fleet modernisation;
- measures will be taken to prevent excessive fragmentation of fishing capacity due to ‘duplication’ (such as refusing to register more than one fishing vessel in the fleet register to replace a previously withdrawn vessel).

VII. SECTION E

Information on changes to fleet management administrative procedures

In 2018, legislative work was completed on changing the way in which operators carrying out commercial and recreational fishing activity are inspected.

On 12 December 2018, the Polish President signed the Act amending the Sea Fisheries Act and certain other acts (Journal of Laws, item 2340). That Act abolishes the three existing District Sea Fisheries Inspectorates in Gdynia, Słupsk and Szczecin as from 1 January 2019.

Upon entry into force, the Act created a central government body, namely the General

Sea Fisheries Inspectorate, appointed by the Prime Minister at the request of the minister responsible for fisheries and reporting directly to that minister. The body will be responsible for tasks associated with checking compliance with provisions on sea fishing and on organising the fisheries market, and the coordination of Poland's monitoring-inspection activities in its implementation of the objectives of the Common Fisheries Policy.

The General Sea Fisheries Inspectorate is based in Słupsk. At the same time, it follows that the minister responsible for fisheries may, by way of an ordinance, set up or abolish regional centres of this body.

By way of the Ordinance of 21 December 2018, the Minister for the Maritime Economy and Inland Waterways set up regional centres of the General Sea Fisheries Inspectorate in Gdynia and Szczecin.

Furthermore, the Act introduces the possibility for individual fishing quotas to be exchanged between vessel owners on a 'species by species' basis.

This arrangement allows for individual fishing quotas to be exchanged in whole or in part between vessel owners granted individual fishing quotas for a given area for the species of marine organism being exchanged. Quotas may be exchanged in accordance with the conversion factor for the number of marine organisms of a given species subject to an individual fishing quota which may be exchanged for a given number of marine organisms of another species subject to an individual fishing quota in the area concerned. The specific conversion factor will be determined annually by the minister responsible for fisheries, by way of a regulation, on the basis of overall fishing quotas and the market value of particular species of marine organism in accordance with the provisions set out in the Act. The minister will also establish detailed arrangements on exchanging individual fishing quotas.

VIII. SECTION F

Estimation and discussion of balance indicators

In May 2018, the National Marine Fisheries Research Institute (*Morski Instytut Rybacki-Państwowy Instytut Badawczy* in Gdynia prepared – at the request of the Fisheries Department at the Ministry of the Maritime Economy and Inland Waterways – the following indicators to assess the balance between fishing capacity and fishing opportunities.

The methodology used to calculate these indicators is consistent with the European Commission's 'Guidelines for the analysis of the balance between fishing capacity and fishing opportunities according to Article 22 of Regulation (EU) No 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy'.

Biological indicators: sustainable harvest indicator, stocks at risk indicator and **technical indicators**: inactive fleet indicator and vessel utilisation indicator were prepared for 2016-18. Following the cycle for collecting economic data which is determined by the dates for submitting form RRW-19 to the National Marine Fisheries Research Institute (report on the economic results of fishing vessels for the year), it is possible for **economic indicators** to be calculated up to the year 2017. Table 9 provides a summary of the values of certain parameters which are important for analysing the sustainability of fleet activity.

Data is taken from ICES advisory documents for Baltic stocks for 2019 and catch data from 2016-18. The economic data used for 2015-17 was collected and approved (initially in the case of 2017) under the EU Data Collection Framework (DCF EU). Catch and landing data used to develop the indicators was made available by the Fisheries Department of the Ministry of the Maritime Economy and Inland Waterways via the Fisheries Monitoring Centre.

The National Marine Fisheries Research Institute calculated the following indicators for each segment of the Polish fishing fleet:

- **Biological indicators (for 2016-18):**
  - ***Sustainable harvest indicator,***
  - ***Stocks at risk indicator;***
- **Economic indicators (for 2015-17):**
  - ***Return on investment (ROI) vs. next best alternative,***
  - ***Ratio of Current revenue to Break-even revenue (CR/BER)***

Technical indicators (for 2016-18):

- ***Vessel utilisation indicator,***
- ***Inactive fleet indicator;***

The indicators were analysed for the following segments of the Polish fishing fleet:

- **VL0010 PG** - vessels up to 10 m in overall length using nets and other passive gear,
- **VL1012 PG** - vessels between 10 m and 12 m in overall length using nets and other passive gear,
- **VL1218 DFN** - vessels between 12 m and 18 m in overall length using nets,
- **VL1218 DTS** - bottom trawlers between 12 m and 18 m in overall length,
- **VL1824 DTS** - bottom trawlers between 18 m and 24 m in overall length,

- **VL1824 TM** - pelagic trawlers between 18 m and 24 m in overall length,
- **VL2440 TM** - pelagic trawlers between 24 m and 40 m in overall length.

Biological indicators for 2016–18

1. Sustainable harvest indicator

The sustainable harvest indicator is a measure of how much a fleet segment relies on stocks that are overfished. 'Overfished' means that a stock is fished above Fmsy, the fishing mortality rate corresponding to maximum sustainable yield. In line with the European Commission's guidelines, the Fmsy fishing mortality rate, i.e. the rate which results in a stock size that produces the maximum sustainable yield (MSY) over a multi-year period, was adopted as a reference fishing mortality.

The sustainable harvest indicator (SHI) for the fleet segment is determined on the basis of all stocks exploited by the segment for which data is available to calculate the F/Fmsy ratio. The sustainable harvest indicator is an average of the F/Fmsy ratio for individual stocks (i) weighted by the value of the landings of that stock by the segment concerned (Vi):

$$SHI=\frac{\sum_{i=1}^{i=n} V_i \frac{F_i}{Fmsy_i}}{\sum_{i=1}^{i=n} V_i},$$

where 'n' represents the number of stocks taken into account.

The lower the value of the indicator, the less dependent the given fleet segment is on overfished stocks. The optimal situation is where all Fi/Fmsyi values are close to 1, meaning the value of the SHI indicator is also close to 1.

According to guidelines from the Scientific, Technical and Economic Committee for Fisheries (STECF), the indicator is deemed unavailable if more than 60% of the value of the catch taken by the segment is catch of stocks for which the fishing mortality rate or Fmsy are not determined.

The SHI was calculated on the basis of stocks for which the F/Fmsy ratio could be established based on ICES assessments and analyses. Those stocks are:

a) Western Baltic cod (sub-areas 22-24);
b) Eastern Baltic cod (sub-areas 24-32); the available F/F_{msy} assessments for this stock were made using the stock-production model (SPiCT);
c) Western Baltic herring (sub-areas 20-24);
d) Central Baltic herring (sub-areas 25-29 and 32);
e) Baltic Sea sprat (sub-areas 22-32).

In 2016-18, the catch value of the above stocks accounted for more than 40% of the total catch value of the segments analysed, with the exception of segment VL0010 PG. The indicator can therefore only be considered unavailable for that segment. The value calculated for that indicator as shown in Table 3 should be treated as supplementary and not be taken into account in the assessment of the segment's balance.

The SHI indicator values are presented in Table 3. The values calculated for 2018 are presented alongside updated calculations for 2016-17 as a result of changes in the F/Fmsy level in subsequent assessments of resources performed by ICES. **Table 3: Sustainable harvest indicator (SHI) for Polish fleet segments analysed for** 2016-18.

Segment	2016	2017	2018
VL0010 PG	1.35	1.42	2.29*
VL1012 PG	1.63	1.80	2.59
VL1218 DFN	1.63	1.89	2.82
VL1218 DTS	1.58	1.87	2.37
VL1824 DTS	1.48	1.77	2.16
VL1824 TM	1.28	1.35	1.47
VL2440 TM	1.21	1.21	1.29

* Indicator not applicable due to low share in catch value of species belonging to stocks with available F/Fmsy.

A new analysis became available in 2019 on the status of Eastern Baltic cod stocks and exploitation (stock synthesis model). However, no Fmsy was determined for this stock. Nevertheless, the F/Fmsy ratio assessment is available on the basis of calculations made using the stock-production model (SPiCT), presenting trends in the biomass and fishing mortality for the stock similar to the stock synthesis model. The F/Fmsy values determined via the SPiCT model were used as data for Eastern Baltic cod in order to calculate the SHI indicator.

During the period under review, all fleet segments were heavily reliant on overfished stock. The SHI indicator exceeded 1, including by a large margin for segments VL1012PG, V1218DFN, V1218DTS and V1824DTS for which cod accounts for between 40 and 60% of the catch value. The SHI indicator is also high for the V0010PG segment. However, catch for which F/Fmsy are available accounts for less than 40% of the catch value of the segment, meaning that the SHI indicator does not need to be presented in this case. As mentioned earlier, the value of the indicator for this segment should therefore be treated as supplementary information. In terms of catch sustainability, the best segments were those fishing mainly herring and sprat, i.e. VL1824TM TM and VL2440TM TM. However, even in these segments the SHI indicator was far greater than 1.

2. *Stocks at risk indicator*

The stocks at risk indicator (SRI) aims to determine the catch taken by a given fleet segment from stocks with heavily reduced biomass and in a condition such that recruitment may be greatly diminished. In accordance with the Commission's guidelines, a stock at risk is a stock:

a) with reproductive biomass below Blim;
b) for which closure has been recommended, targeted fishing banned, catch reduced to the lowest possible level, etc.;
c) subject to regulations on returning fish unharmed to the sea or banning landings;
d) on the 'red list' or listed by CITES.

The indicator is calculated as the number of stocks exploited by a given segment which meet the following conditions:

1) catch from the stocks considered at risk makes up more than 10% of the fleet segment's catch

or

2) more than 10% of the fleet segment's catch is from stock considered at risk.

The calculation formula is as follows:

$$SRI=\sum_{i=1}^{i=n}(1 \textit{ where } (C_i > 0.1\ C_t) \textit{ or } (C_i > 0.1T_i); \textit{otherwise } 0),$$

where
Ci – catch from stock i,
Ct – total catch of all stocks taken by the fleet segment,
Ti – total catch of stock i taken by all segments.

Of the stocks which were analysed, the following met the 'at risk' criteria:

a) Western Baltic herring in 2016-18 as the stock biomass was lower than Blim during that period;
b) Western Baltic cod in 2016-17 as the stock biomass was lower than Blim during that period, contrary to 2018 when Blim was exceeded slightly;
c) Eastern Baltic cod in 2018 as the stock biomass was lower than Blim in that year, contrary to 2016-17 when Blim was exceeded.

The SRI values calculated for the segments of the Polish fleet which were analysed are presented in Tables 4(a) to (c) below.

Table 4: *Stocks at risk indicator (SRI) for Polish fleet segments analysed for* **2016-18.**

a) 2016

Segment	Cod catch in sub-areas 22-24 (in thousand	Herring catch in sub-areas 20-24 (in thousand	Total catch of segment (in thousand tonnes)	SRI indicator
VL0010 PG	0.02	0.33	8.49	**1**
VL1012 PG	0.15	0.22	4.00	**1**
VL1218 DFN	0.07	0.00	1.46	**0**
VL1218 DTS	0.34	0.47	18.87	**2**
VL1824 DTS	0.13	0.05	11.16	**1**
VL1824 TM	0.00	0.00	20.13	**0**
VL2440 TM	0.01	1.76	74.78	**1**
Total	0.70	2.84	138.90	

b) 2017

Segment	Cod catch in sub-areas 22-24 (in thousand	Herring catch in sub-areas 20-24 (in	Total catch of segment (in thousand tonnes)	SRI indicator
VL0010 PG	0.02	0.35	6.48	**1**
VL1012 PG	0.25	0.37	4.01	**2**
VL1218 DFN	0.04	0.00	1.35	**0**
VL1218 DTS	0.36	0.20	10.91	**1**
VL1824 DTS	0.25	0.17	8.86	**1**
VL1824 TM	0.01	0.05	20.40	**0**
VL2440 TM	0.02	2.26	85.72	**1**
Total	0.95	3.38	137.74	

c) 2018

Segment	Cod catch in sub-areas 24-32 (in thousand	Herring catch in sub-areas 20-24 (in	Total catch of segment (in thousand tonnes)	SRI indicator
VL0010 PG	0.53	0.29	5.62	**1**
VL1012 PG	1.11	0.27	4.95	**2**
VL1218 DFN	0.21	0.00	0.40	**1**
VL1218 DTS	1.81	0.21	11.65	**2**
VL1824 DTS	1.50	0.03	11.13	**2**
VL1824 TM	0.53	0.00	24.73	**0**
VL2440 TM	0.27	0.94	98.95	**0**
Total	5.96	1.74	157.43	

In 2016-17, Western Baltic cod and herring catch did not exceed 10% of the catch of any fleet segment (condition 1 regarding reliance on catch from stocks at risk). Catch of Western Baltic cod is limited, generally representing less than 1 % of the Polish fleet's total catch. Similarly, catch of Western Baltic herring was relatively small, accounting for 2-3% of the fleet's catch during the period under review. However, in some cases, catch of stocks at risk by a given segment represented over 10 % of the catch of that stock by all segments (condition 2 regarding reliance on catches from stocks at risk). Consequently, the SRI was 1 or 2 for most segments over the period concerned (table 4(a), (b)).

In 2018, Western Baltic cod ceased to be a stock at risk, whereas Eastern Baltic cod became a stock at risk. Due to the significance of this stock in terms of the catch taken by the fleet, three segments (VL1012PG, VL1218DTS, VL1824DTS) met both the first and the second condition regarding reliance on catch from stocks at risk

In conclusion, **the catch taken by most segments comprised a 'significant' share (> 10%) of stocks at risk, specifically one or two stocks at risk**. In 2018, the SRI increased slightly. Moreover, only segments VL1824TM and VL2440TM caught a limited amount of stocks at risk (SRI = 0).

Economic indicators for 2015-17

1. Return on investment (ROI) vs next best alternative

The return on investment indicator is a measure of the profitability of economic activity which enables the return on the assets used by an undertaking to be evaluated. The indicator is calculated in terms of the profitability of an undertaking relative to the value of its fixed assets (value of vessel). **If the value of the indicator is greater than 0, this means that the assets used generate income**. In this scenario, the interpretation of the indicator depends on cost of the next best alternative. **In general, if the ROI indicator is below 0, this means that the activity is not profitable.** If this situation is permanent, the fishing enterprise should consider investing capital used in fixed assets. The next best alternative could be, for example, government bonds. The differences in indicator values for individual fleet segments during the period under review show which group of vessels (vessel segment) makes the most efficient use of assets for a given activity.

Table 5 presents the value of the ROI indicator and the data used to calculate it (N.B.: In the table, subsidies, however, were not taken into account when calculating the indicator).

Table 5: Return on investment indicator for Polish Baltic fleet segments in 2017 (in thousand €)

No	Specification	VL0010 PG	VL1012 PG	VL1218 DFN	VL1218 DTS	VL1824 DTS	VL1824 TM	VL2440 TM	Total/ average
1.	**Total revenue, of which:**	**13 611**	**5 065**	**2 206**	**7 724**	**5 085**	**7 528**	**21 413**	**62 633**
	income from landings	7 124	3 404	1 503	5 430	3 950	5 294	21 409	48 114
	other income	24	8	56	120	0	0	4	212
	subsidies	6 463	1 653	648	2 174	1 135	2 235	0	14 307
2.	**Total costs, of which:**	**8 906**	**4 090**	**1 509**	**4 939**	**3 639**	**3 202**	**16 730**	**43 015**
	wages	2 568	1 244	508	1 102	750	896	5 066	12 134
	unpaid work	3 907	941	105	263	137	315	653	6 321
	energy consumption	618	431	256	1 134	896	712	3 916	7 964
	repair and maintenance	241	213	57	549	584	349	2 086	4 079
	other variable costs	849	651	245	970	311	293	1 296	4 614
	fixed costs	568	491	284	703	679	494	2 203	5 421
	depreciation	155	120	54	218	283	143	1 510	2 482
3.	Profit/loss (revenue minus subsidies– total costs)	-1 758	-678	50	611	311	2 092	4 684	5 311
4.	Fixed assets (value)	21 803	14 926	5 276	11 452	9 361	12 451	41 972	117 240
5.	**ROI (profit/fixed assets)**	**-8.06%**	**-4.55 %**	**0.95 %**	**5.33 %**	**3.33 %**	**16.80**	**11.16 %**	**4.53 %**

Terms and definitions:

Income from landings – estimate based on data from first-sale documents. In the absence of such documents – this applies to sales of vessels of less than 8 m in length and cases where certain data relating to vessels of above 8 m are incomplete – the value of fish sales was calculated with reference to average annual prices of individual fish species by vessels which submitted first-sale documents, and to data relating to the value of catch taken by the entire fleet.

Other income – additional income from accompanying activities such as tourism or occasional activities.

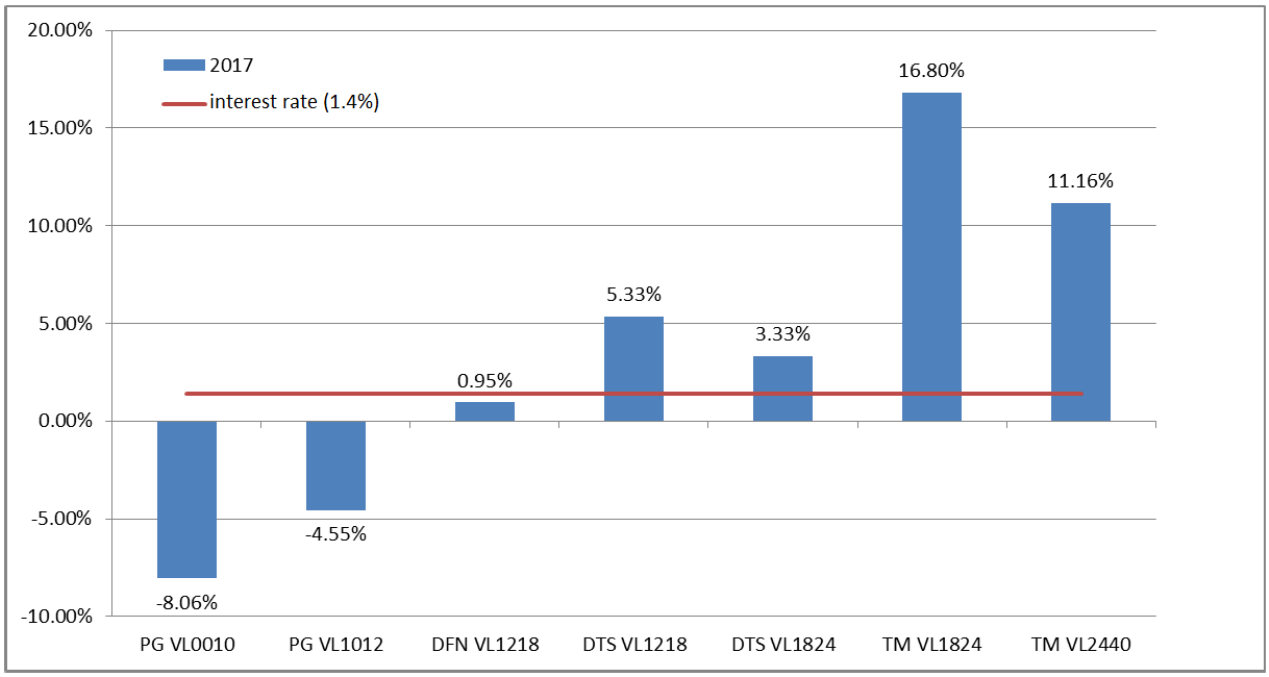
Subsidies– mostly includes state aid granted to fishing vessel shipowners under the FISH OP, mainly in the form of compensation payments for temporary suspension of fishing activity and subsidies for vessel modernisation. **Wages** – includes gross wages plus benefits.

Unpaid work – estimated value of unpaid work (e.g. owners and their families).

Energy consumption – covers fuel and lubricants used by vessels.

Repair and maintenance – technical support services for fishing vessels and equipment. Mostly provided as external services (e.g. bookkeeping). This includes costs incurred by shipowners for the purchase of materials and services for ongoing vessel repairs and renovation. Data are determined on the basis of the RRW-19 statistics form.
Other variable costs – includes expenditure on fishing gear, ice, fish boxes, protective clothing, other materials, crew catering services, port and landing fees.
Fixed costs – costs not related to catch, incurred in respect of applicable fees, property insurance, protection measures, external services (except for renovation), financial costs, other costs, etc.
Depreciation – annual depreciation calculated on the basis of accounts, declared by fishing enterprises in RRW-19 forms.
Value of fixed assets – specified separately for each fishing vessel on the basis of a compensation rate obtainable by shipowners where vessels are withdrawn with state aid.
Profit or loss – calculated on the basis of the above data as the difference between income from landings plus other income and total costs; does not include subsidies.
ROI – indicates profit or loss relative to the value of fixed assets.

Figure 1: Return on investment indicator for Polish Baltic fleet segments (in thousand €)



Interest rate minus inflation

Interpretation of ROI indicators

In 2017, the entire sector became less attractive for investment (4.53% on average, compared with 9.41% in 2016 and 9.36% in 2015). Nevertheless, the sector as a whole remained above the level of the next best alternative investment, which in 2017 was 1.4% for Poland (indicator adjusted for inflation in 2017). The value of the indicator had worsened primarily as a result of a 6% decrease in income from landings and an increase in costs, mainly wages (+23%) and unpaid work (+26%). As a result, the net result fell significantly (from €11.7 million to €5.3 million (- 55%). This had a negative impact on the ROI, which fell from 9.41% to 4.53%.

Alongside labour costs, fuel costs are the most expensive cost item. In 2017, on account of minimal price changes, fuel costs did not change significantly (increase of 4%).

ROI indicator values varied across fishing segments. The first group consisted of profitable vessels. In 2017, as in previous years, segment VL1824TM TM was the most effective segment (pelagic cutter trawlers between 18 m and 24 m in length). The ROI indicator was 17%, representing a deterioration compared with the previous period (26% in 2016 and

27% in 2015). Nevertheless, the return was approximately 12 times the next best interest rate for the year under review. Very good results were also achieved by segment VL2440TM, a neighbouring segment of vessels also targeting pelagic fish. However, the indicator value for this segment also deteriorated compared with 2016. The positive results achieved by those segments was due to the fact that pelagic fishing remained sufficiently effective despite a decline in prices.

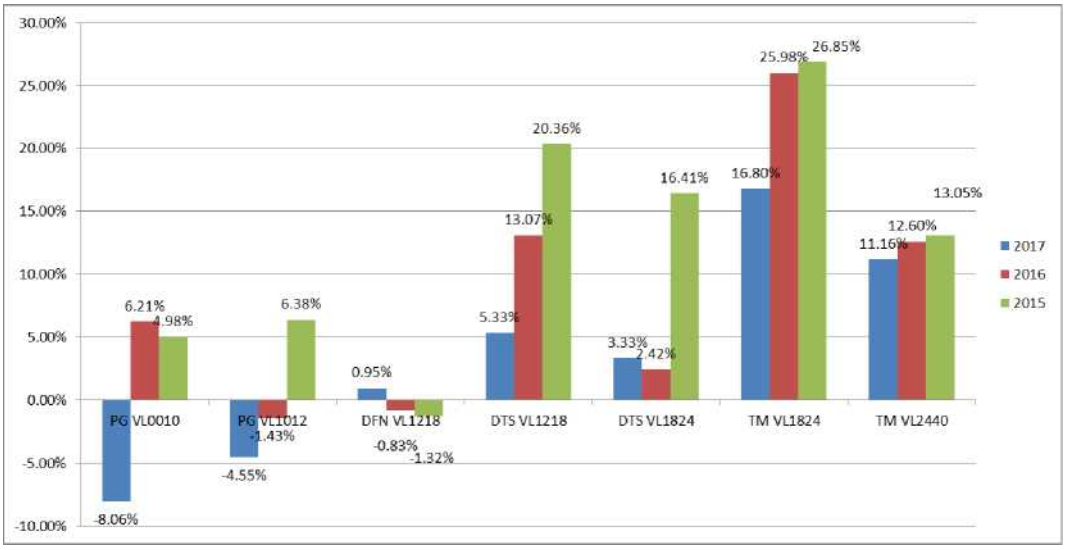
Segment VL1218DTS (bottom trawlers) recorded a lower ROI, although this was still higher than the second alternative. The rate of return for this segment was 5.33%, compared with 13% in 2016 and 20.36% in 2015. The decline in this indicator was largely due to lower income from landings (down by nearly 14 %) in the segment mainly as a result of reduced cod landings.

The ROI indicator of the second segment of bottom trawlers (VL1824DTS) was also positive, achieving 3.33% as compared with 2.4 % in 2016 and 16.41 % in 2015. The increase in this indicator was due to the smaller decline in the landing value (31%, compared with 25% in 2016) than in fishing costs. The result was positive and above the next best alternative.

The final group of vessels with a positive indicator value were the vessels in segment VL1218DFN. However, they made only a small profit in 2017 (€50 000, compared with a loss of €60 000 in 2016). The improved financial situation of those vessels compared with the previous year has nevertheless been noted. The ROI indicator in 2017 (0.95%) was still lower than the next best alternative (1.4%) of investing half of the capital.

Long-term ROI indicator trends are shown in Figure 2.

Figure 2: Long-term ROI indicator trends, 2015-17



The final group comprises segments which recorded losses. In 2017, the following two segments posted operating losses: vessels fishing with passive gear, i.e. segments VL0010PG and VL1012PG. The investment deficit recorded in 2017 in the segment comprising vessels up to 10 meters was mainly the result of a decrease in income from landings (- 13%), a significant increase in wages (+ 30%) and an increase in the cost of unpaid work (+ 60%). In 2017, a deficit of

€6.5 million was recorded, similar to the amount of income earned from landings (€7.1 million). Neighbouring fleet segment VL1012PG also recorded losses in fishing activity and thus a negative ROI indicator. Despite an increase in catch value (+ 5%), the indicator deteriorated by more than 3 percentage points compared with 2016. This was, in particular, due to higher labour costs, mainly the cost of unpaid work (+ 40%), and an increase in other variable costs.

2. Ratio between current revenue and break-even revenue (CR/BER) indicator

The CR/BER indicator constitutes a profitability threshold which indicates if revenue is equal to the fixed and variable costs of a segment. Break-even revenue (BER) is the amount of revenue equivalent to all costs, whereas current revenue (CR) is the total operating income of a vessel or segment. The CR/BER indicator shows how close a fishing vessel is to becoming profitable in the short-term. **If the ratio is greater than 1, revenue is greater than or equal to variable and fixed costs**, meaning that the segment is profitable. **If the ratio is less than 1, the fleet/segment does not generate sufficient revenue to cover its costs**. **A negative CR/BER indicator means core activity is unprofitable and fixed costs cannot be covered (variable costs are higher than the revenue of the segment).**.

The calculation method includes a short-term analysis, meaning that the opportunity cost, although shown in the table, is not taken into account in the calculations.

The CR/BER indicator by fleet segment in 2017 is presented in Table 6.

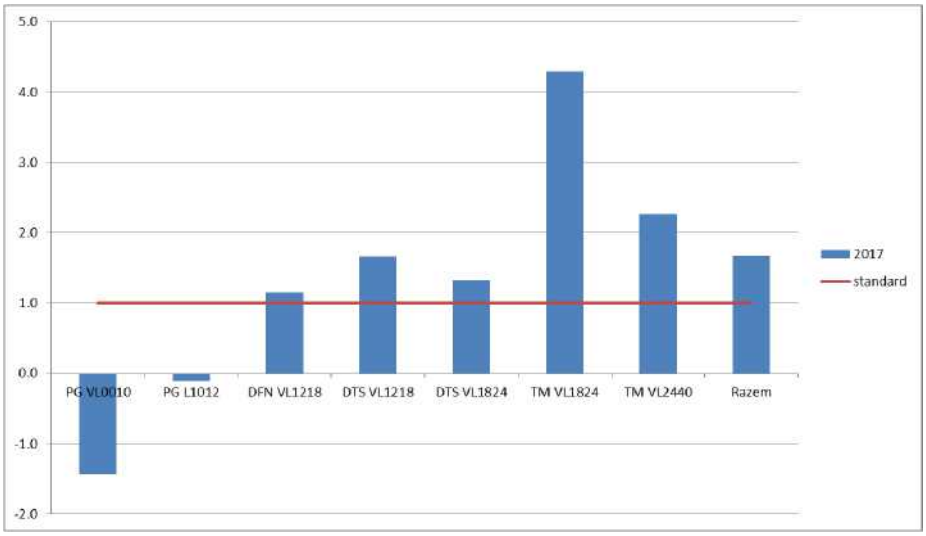
Table 6: CR/BER (current revenue/break-even revenue) indicator in 2017 (in thousand €)

No	Specification	VL0010 PG	VL1012 PG	VL1218 DFN	VL1218 DTS	VL1824 DTS	VL1824 TM	VL2440 TM	Total
1.	**Total revenue (CR), of which:**	**13 611**	**5 065**	**2 206**	**7 724**	**5 085**	**7 528**	**21 413**	**62 633**
	income from landings	7 124	3 404	1 503	5 430	3 950	5 294	21 409	48 114
	other income	24	8	56	120	0	0	4	212
	subsidies	6 463	1 653	648	2 174	1 135	2 235	0	14 307
2	**Variable costs, of which:**	**8 183**	**3 480**	**1 171**	**4 018**	**2 678**	**2 565**	**13 017**	**35 111**
	wages	6 475	2 185	612	1 366	887	1 211	5 718	18 454
	energy consumption	618	431	256	1 134	896	712	3 916	7 964
	repair and maintenance	241	213	57	549	584	349	2 086	4 079
	other variable costs	849	651	245	970	311	293	1 296	4 614
3	**Fixed costs, of which:**	**722**	**610**	**338**	**921**	**961**	**637**	**3 713**	**7 904**
	Non-variable costs	568	491	284	703	679	494	2 203	5 421
	depreciation	155	120	54	218	283	143	1 510	2 482
	Opportunity cost (not included)*	304	208	73	159	130	173	584	1 632
4	**Break-even revenue (BER)**	- 4 989	-	1 358	3 337	2 984	1 235	9 470	28 903
5	**CR/BER**	- 1.43	- 0.11	**1.15**	**1.66**	**1.32**	**4.29**	**2.26**	**1.67**

Terms and definitions:

Fixed costs – costs calculated independently of the catch volume associated with the activities of fishing enterprises.
Variable costs – costs determined on the basis of the catch levels (effects) or fishing effort of fishing enterprises.
Other fixed costs – costs not directly associated with fishing vessel catch volumes (including port fees, external services, insurance, financial and other costs).
Opportunity cost – should only be included in long-term assessments. This is the cost of using capital for the next best alternative.
CR (current revenue) – total current revenue.
BER (break-even revenue) – revenue which would cover all (fixed and variable) costs and mean a normal profit is generated (0).

Figure 3: CR/BER indicators for individual fleet segment in 2017 (public subsidies excluded from calculations).



Interpretation of CR/BER indicators

The CR/BER parameter is assessed in order to consider the financial viability of a given segment and the ratio between operating revenue and costs according to their degree of variability. The break even point can serve as a comparison against revenue obtained. **Segments which demonstrate that they can at least fully break even receive a positive assessment ('1').**

A long-term downward trend in the BER indicator is a sign of an improved ratio between these key economic parameters (revenue/variable costs/fixed costs) and the increased profit-making potential of the segment. In 2017 the Baltic fleet saw revenue from landings decrease by an average of 6% compared with the previous year. This was accompanied by a 16 % increase in variable costs and a 20 % increase in fixed costs which adversely affected performance.

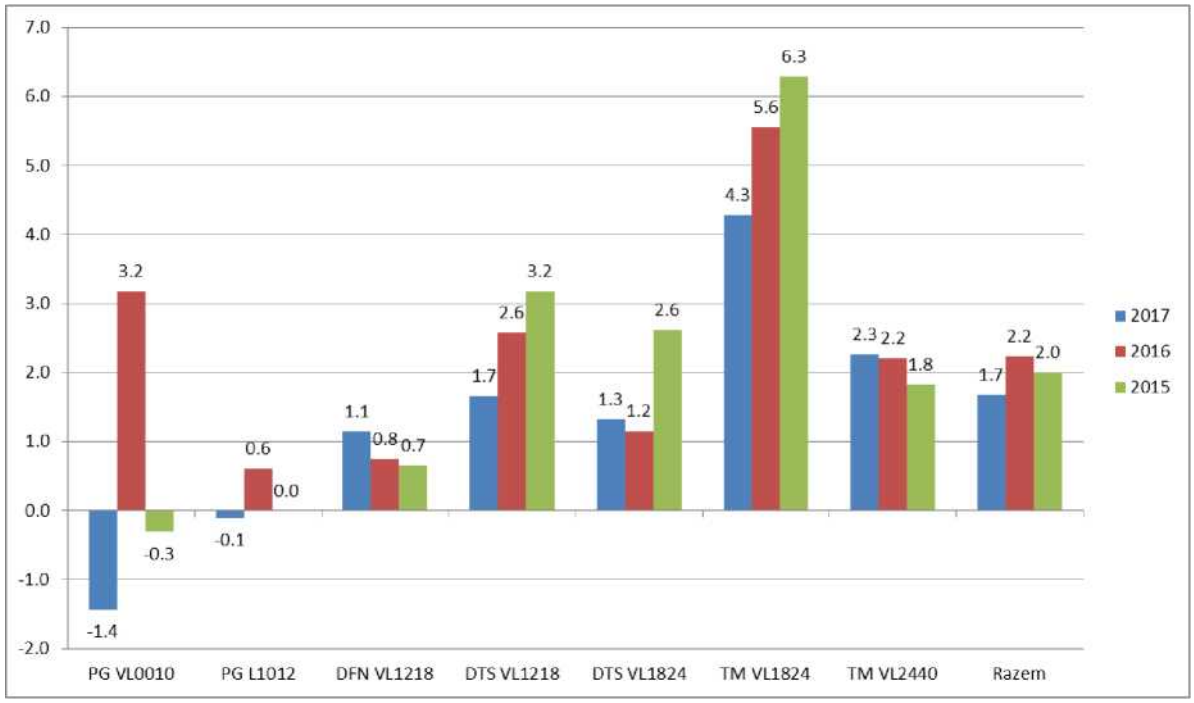
An analysis of the CR/BER indicator showed that performance was varied. There are segments which were profitable and which have continued to improve and unprofitable segments which continued on a downward trend.

There were five profitable segments with a CR/BER indicator value of above 1: VL1218DFN, VL1218DTS, VL1824DTS, VL1824TM, VL2440TM. As in 2016, the most favourable ratio was achieved by segment VL1824TM. The revenue of the segment was significantly higher than break even revenue (4.3). The second most financially viable was the neighbouring segment of pelagic trawlers between 24 m and 40 m in length (VL2440TM, with an indicator value of 2.3), followed by the segment of bottom trawlers between 12 m and 18 m in length (VL1218DTS, with an indicator value of 1.7). As in 2016, the high number of vessels from both groups reaching break-even was due to pelagic catch being very profitable.

Segments VL0010PG (indicator value of -1.43) and VL1012 PG (indicator value -0.11) operated at a loss. In both segments, wage costs increased considerably (including the cost of unpaid work). This had a negative impact on the indicator value.

Long-term CR/BER indicator trends are shown in Figure 4.

Figure 4: CR/BER indicator values by fleet segment for **2015-17**



Technical indicators for 2016-18

1. Vessel utilisation indicator

The vessel utilisation indicator was calculated on the basis of data on Baltic fleet activity between 2016 and 2017 provided by the Fisheries Monitoring Centre (Centrum Monitorowania Rybołóstwa) from the ERS database, supplemented by information from monthly catch report cards.

As in previous years, the term ‘fishing day’ was defined as any continuous period of 24 hours (or part thereof) during which a vessel is present in a given zone and absent from port. For vessels submitting monthly fishing reports, a fishing day was a calendar day. Engine power (kW) and vessel capacity (GT) were determined on the basis of the ERS database for a given day of vessel fishing activity. Consequently, both values are calculated taking into account any changes in vessel parameters during the year. The only exception concerned technical data for vessels not found in the ERS database. Where this was the case, values were based on the technical parameters in the fishing vessel register. Furthermore, in contrast to the methodology used to calculate the inactive fleet indicator value (which only takes into account the vessels included in the register as at 1 January of the year concerned), the fleet capacity utilisation indicator was calculated taking into account all vessels active during the year (including those entering operation after 1 January of the year concerned). In accordance with the methodology adopted, the maximum number of days actually spent at sea for the segment concerned was determined taking into account the number of such days reported for the most active vessel in that segment. As in previous years, the theoretical number of fishing days was not calculated. Data on fleet activity in the Baltic Sea are set out in Table 7.

Table 7: Vessel utilisation statistics by fleet segment for **2016-18**

Year	Segment	Vessel number, power and capacity			Current effort			Maximum theoretical effort (observation data)				INDICATOR	
		Number	kW	GT	Days	kWdays	GTdays	Days per vessel[1]	Days Total	kWdays	GTdays	kWdays	GTdays
2016	VL0010 PG	513	14 243	1 534	43 667	1 301 139	134 165	226	115 938	3 218 879	346 610	40%	39%
	VL1012 PG	106	6 990	1 171	9 090	611 124	104 091	179	18 974	1 251 228	209 588	49%	50%
	VL1218 DFN	27	3 506	862	2 789	335 356	88 986	191	5 157	669 571	164 598	50 %	54 %
	VL1218 DTS	67	8 105	1 849	7 154	888 780	206 647	194	12 998	1 572 456	358 797	57%	58%
	VL1824 DTS	28	6 153	1 611	2 840	603 781	165 808	174	4 872	1 070 599	280 314	56%	59%
	VL1824 TM	27	6 691	1 706	2 980	733 952	202 237	225	6 075	1 505 475	383 850	49%	53%
	VL2440 TM	44	17 631	7 341	5 462	2 214 831	933 376	195	8 580	3 438 029	1 431 495	64%	65%
Total 2016		**812**	**63 319**	**16 074**	**73 982**	**6 688 964**	**1 835 310**	**213**	**172 594**	**12 726 237**	**3 175 252**	**53%**	**58%**
2017	VL0010 PG	509	14 254	1 537	34 198	1 042 844	108 858	212	107 908	3 021 850	325 771	35%	33%
	VL1012 PG	114	7 351	1 220	7 587	519 177	87 079	170	19 380	1 249 670	207 319	42%	42%
	VL1218 DFN	22	2 834	721	1 876	236 904	62 381	184	3 680	521 382	132 697	45%	47%
	VL1218 DTS	49	5 859	1 333	4 478	574 026	129 179	180	8 820	1 054 685	240 015	54%	54%
	VL1824 DTS	23	5 112	1 392	2 288	521 275	148 501	169	3 887	863 962	235 257	60%	63%
	VL1824 TM	31	7 664	1 864	3 164	783 214	208 230	195	6 045	1 494 480	363 465	52%	57%
	VL2440 TM	44	17 673	7 389	5 749	2 321 549	970 232	188	8 272	3 322 526	1 389 132	70%	70%
Total 2017		**790**	**60 537**	**15 389**	**59 333**	**5 998 172**	**1 714 213**	**200**	**157 992**	**11 489 970**	**2 881 328**	**52%**	**59%**
2018	VL0010 PG	509	14 180	1 524	37 350	1 058 022	112 580	164	83 476	2 325 554	249 980	45%	45%
	VL1012 PG	105	7 098	1 160	8 508	596 545	99 127	186	19 530	1 320 135	215 679	45%	46%
	VL1218 DFN	10	1 151	331	999	110 231	30 699	196	1 960	225 576	64 798	49%	47%
	VL1218 DTS	51	6 315	1 419	5 453	708 117	159 685	187	9 537	1 180 893	265 336	60%	60 %
	VL1824 DTS	25	5 618	1 655	2 739	614 272	180 459	188	4 700	1 056 222	311 140	58%	58%
	VL1824 TM	33	8 211	1 891	3 001	742 885	183 789	184	6 072	1 510 821	347 944	49%	53%
	VL2440 TM	44	17 811	7 514	5 561	2 271 378	963 712	194	8 536	3 455 260	1 457 716	66%	66 %
Total 2018		**777**	**60 383**	**15 493**	**63 611**	**6 101 448**	**1 730 051**	**172**	**133 811**	**11 074 461**	**2 912 593**	**55%**	**59%**

Note: Due to the clustering of fleet segments (where the number of vessels is below 10) and the inclusion of all vessels active during the year in the calculation, data relating to vessel numbers, power and capacity may differ from the data in Table 9.

[1] The number of days at sea by the most active vessel in a given segment.

In 2018, the kWdays and GTdays indicator calculated for all years was lower than the reference indicator (0.7) for all fleet segments. This shows that the fishing capacity of the fleet was under-utilised. Overall, the value of the indicator for the Baltic fleet did not change significantly in 2018 as compared with 2017. All segments comprising vessels up to 18 meters in length improved slightly (by a few percentage points). Segment VL0010 PG improved most (kWdays by 10 percentage points and GTdays by 12 percentage points). As the indicator for the neighbouring segment of vessels between 10 m and 12 m in length also improved, fishing vessels <12 m appear to have been more active in 2018 than the previous year. This observation is confirmed by data on the average number of fishing days presented below.

However, the vessel utilisation indicator deteriorated for vessels more than 18 m in length, with segment VL2440 TM seeing the greatest deterioration (by 4 percentage points). Nevertheless, this change is still of little significance, with the indicator fluctuating naturally over longer periods of time and permanent trends being harder to find.

As in previous years, 2018 saw the lowest utilisation rate of potential working time by fishing vessels up to 12 m in length. As the value of the indicator for this segment has remained at its lowest level for many years, it would appear that those vessels are naturally like this. Small fishing vessels operate in restricted fishing areas which are highly diversified in terms of seasonal fishing activity. Hence such vessels are decidedly more exposed to negative weather impacts than larger fishing vessels. These vessels also include vessels not used for strictly commercial fishing activity but which carry this out as a complementary activity (e.g. vessels carrying out fishing activity as a secondary activity or for their own use). On the other hand,

there are also vessels trying to maximise revenue by making optimal use of fishing opportunities and thereby raising the maximum theoretical effort.

Figure 5: Fleet capacity utilisation levels in kW days and GT days for **2016-18**

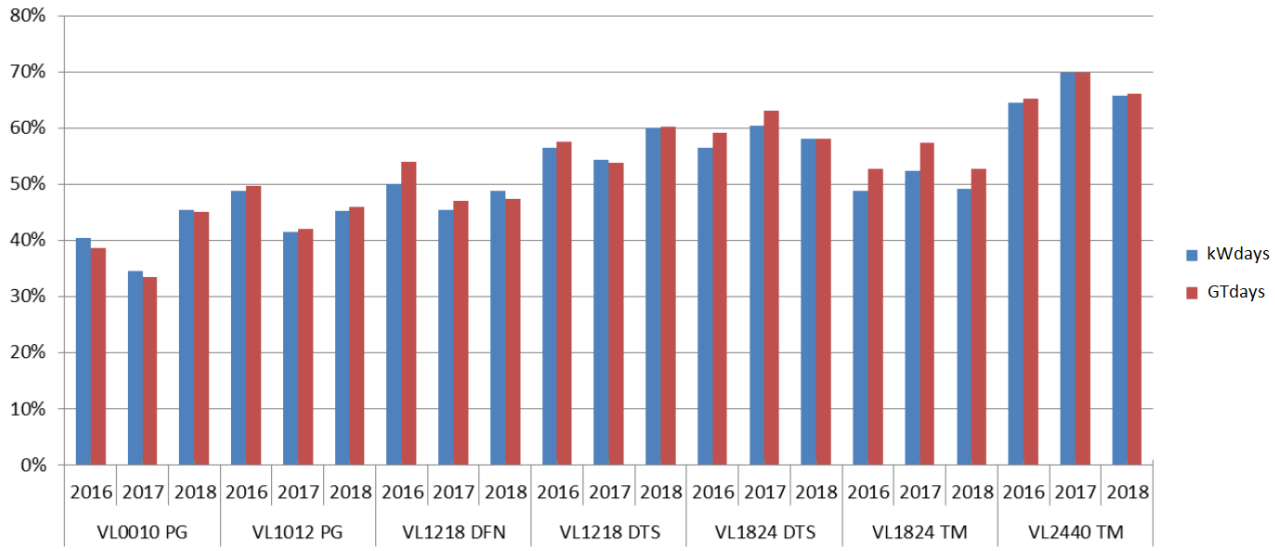
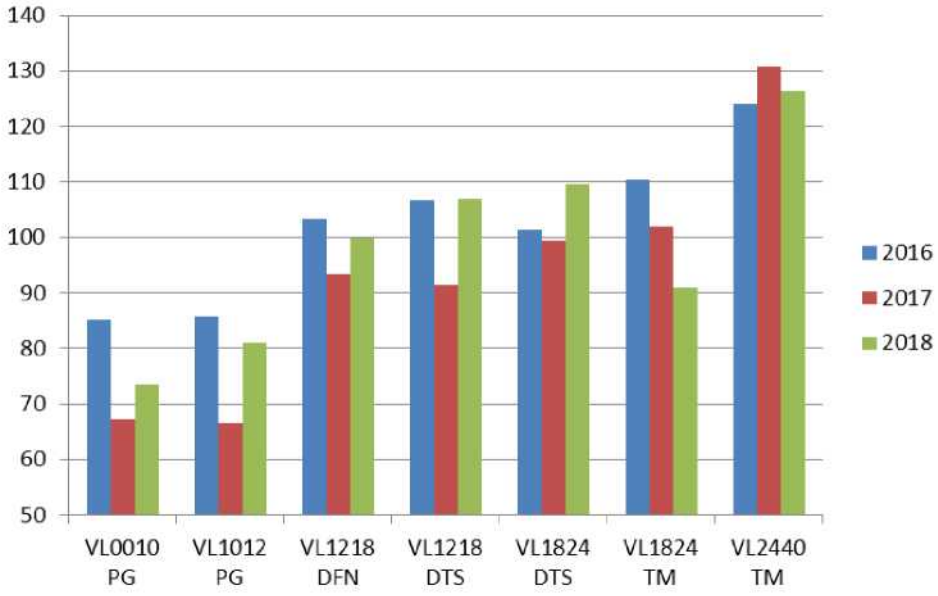


Figure 6 presents the average annual number of fishing days for vessels by segment. An analysis of average fishing effort data mitigates the impact of the maximum theoretical effort indicator being raised by individual vessels. In 2018, the average number of fishing days decreased compared with 2017 in two segments, namely pelagic trawlers between 18 m and 24 m in length (VL1824TM) and pelagic trawlers between 24 m and 40 m in length (VL2440TM) (decrease by 11% and 3% respectively). In 2018, vessels belonging to segment VL1824TM – using pelagic trawls – caught approximately 20% more fish than the previous year, including almost 50% more herring, which indicates a significant increase in fishing productivity in this segment despite a deterioration in the vessel utilisation indicator. The vessel utilisation indicator was higher in the remaining fleet segments, notably 17% higher in the case of VL1218DTS vessels.

Figure 6: Average number of fishing days **in 2015-16**



2 Inactive fleet indicator

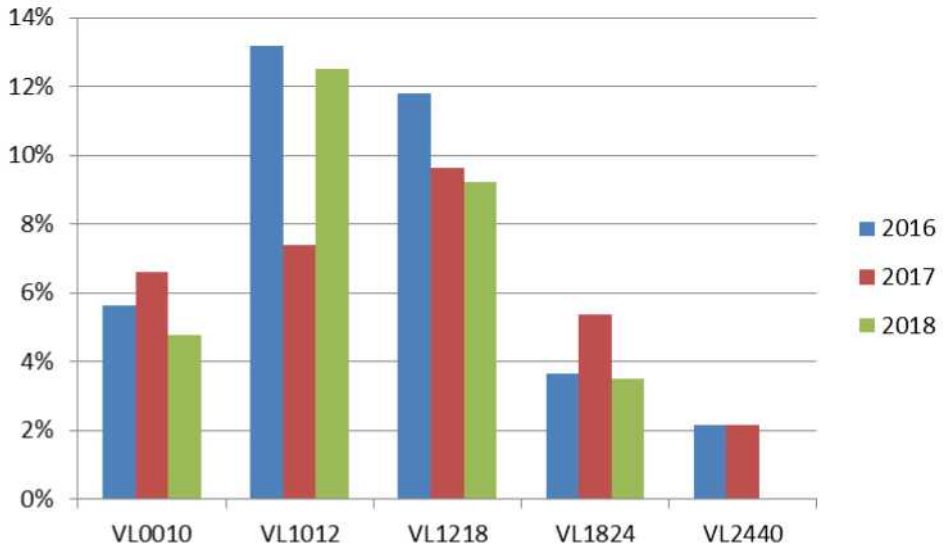
The inactive fleet indicator value was calculated on the basis of fleet register data for vessels operating in the Baltic Sea which were registered as at 1 January of each year under review. According to the guidelines in place, the indicator of fishing vessel activity is at least one fishing day reported by the vessel owner over the course of the year. Data analysis was carried by vessel length (VL) in accordance with the Data Collection Framework (DCF) methodology.

In 2018, as in previous years, the share of inactive vessels in the Polish Baltic fleet remained relatively low. Compared with 2017, the overall value of the indicator improved slightly: 6%, 3% and 3% respectively in terms of the number of vessels, GT and kW (compared with 7%, 5% and 5% in 2017). There was a noticeable decrease in the number of inactive vessels in segment VL0010 (decrease from 35 to 25). Conversely, the number of inactive vessels increased in the segment of vessels between 10 m and 12 m in length (increase from 9 to 15). As in previous years, those changes were not significant enough in terms of the overall number of fishing vessels to fundamentally affect the inactive fleet indicator. The inactive vessel indicator only exceeded the level of 10% referred to in the methodology as the level occurring under normal conditions in one segment (number of inactive vessels/total for segment VL1012).

Table 8: Fleet activity statistics for **2016-18**

Year	DCF length	Active			Inactive			Inactive/total		
		No	GT	kW	No	GT	kW	No	GT	kW
2016	VL0010	501	1 458	13 689	30	79	512	6%	5%	4%
	VL1012	112	1 194	7 438	17	129	861	13%	10%	10%
	VL1218	97	2 748	11 728	13	266	1 410	12%	9%	11%
	VL1824	53	3 071	12 167	2	180	455	4%	6%	4%
	VL2440	45	7 113	17 569	1	259	385	2%	4%	2%
	VL40XX	1	468	740				0%	0%	0%
Total 2016		**809**	**16 052**	**63 331**	**63**	**913**	**3 623**	**7%**	**5%**	**5%**
2017	VL0010	496	1 464	13 730	35	78	450	7%	5%	3%
	VL1012	113	1 152	7 171	9	80	558	7%	6%	7%
	VL1218	75	2 034	8 766	8	177	965	10%	8%	10%
	VL1824	53	3 071	12 101	3	257	723	5%	8%	6%
	VL2440	45	7 113	17 569	1	259	385	2%	4%	2%
	VL40XX	1	468	740				0%	0%	0%
Total 2017		**783**	**15 302**	**60 076**	**56**	**851**	**3 081**	**7%**	**5%**	**5%**
2018	VL0010	500	1 464	13 728	25	71	387	5%	5%	3%
	VL1012	105	1 091	6 863	15	104	694	13%	9%	9%
	VL1218	69	1 880	8 213	7	97	533	9%	5%	6%
	VL1824	55	3 206	12 737	2	180	455	4%	5%	3%
	VL2440	46	7 386	18 476				0%	0%	0%
	VL40XX	1	468	740				0%	0%	0%
Total 2018		**776**	**15 494**	**60 757**	**49**	**453**	**2069**	**6%**	**3%**	**3%**

Figure 7: Relative share of inactive vessels by vessel length category



IX. Analysis and evaluation of the balance between fishing capacity and fishing opportunities by fleet segment over three consecutive years

Table 9: List of indicator values **for individual segments of the Polish fishing fleet over three consecutive years (2015-17 or 2016-18 respectively)**

Segment	Number of fishing vessels	Sustainable harvest indicator (SHI)	Stocks at risk indicator (SRI)	CR/BER	ROI	Vessel utilisation indicator	
						kWdays	GTdays
VL0010PG	509 in 2018	2.29 in 2018	1 in 2018	-1.43 in 2017	-8.06% in 2017	45% in 2018	45% in 2018
	509 in 2017	1.42 in 2017	1 in 2017	3.18 in 2016	6.21 % in 2016	35 % in 2017	33 % in 2017
	513 in 2016	1.35 in 2016	1 in 2016	-0.31 in 2015	-4.98 % in 2015	40 % in 2016	39 % in 2016
VL1012PG	105 in 2018	2.59 in 2018	2 in 2018	-0.11 in 2017	-4.55 % in 2017	45 % in 2018	46 % in 2018
	114 in 2017	1.80 in 2017	2 in 2017	0.61 in 2016	-1.43 % in 2016	42 % in 2017	42 % in 2017
	106 in 2016	1.63 in 2016	1 in 2016	0.00 in 2015	-6.38 % in 2015	49 % in 2016	50 % in 2016
VL1218DFN	10 in 2018	2.82 in 2018	1 in 2018	1.15 in 2017	0.95 % in 2017	49 % in 2018	47 % in 2018
	22 in 2017	1.89 in 2017	0 in 2017	0.75 in 2016	-0.83 % in 2016	45 % in 2017	47 % in 2017
	27 in 2016	1.63 in 2016	0 in 2016	0.65 in 2015	-1.32 % in 2015	50 % in 2016	54 % in 2016
VL1218DTS	51 in 2018	2.37 in 2018	2 in 2018	1.66 in 2017	5.33 % in 2017	60 % in 2018	60 % in 2018
	49 in 2017	1.87 in 2017	1 in 2017	2.58 in 2016	13.07% in 2016	54% in 2017	54% in 2017
	67 in 2016	1.58 in 2016	2 in 2016	3.18 in 2015	20.36% in 2015	57% in 2016	58% in 2016
VL1824DT	25 in 2018	2.16 in 2018	2 in 2018	1.32 in 2017	3.33% in 2017	58% in 2018	58% in 2018
	23 in 2017	1.77 in 2017	1 in 2017	1.15 in 2016	2.42% in 2016	60% in 2017	63% in 2017
	28 in 2016	1.48 in 2016	1 in 2016	2.62 in 2015	16.41% in 2015	56% in 2016	59% in 2016
VL1824TM	33 in 2018	1.47 in 2018	0 in 2018	4.29 in 2017	16.80% in 2017	49% in 2018	53% in 2018
	31 in 2017	1.35 in 2017	0 in 2017	5.56 in 2016	25.98% in 2016	52% in 2017	57% in 2017
	27 in 2016	1.28 in 2016	0 in 2016	6.29 in 2015	26.85% in 2015	49% in 2016	53% in 2015
VL2440TM	44 in 2018	1.29 in 2018	0 in 2018	2.26 in 2017	11.16% in 2017	66% in 2018	66% in 2018
	44 in 2017	1.21 in 2017	1 in 2017	2.21 in 2016	12.60% in 2016	70% in 2017	70% in 2017
	44 in 2016	1.21 in 2016	1 in 2016	1.83 in 2015	13.05% in 2015	64% in 2016	65 % in 2016

Summary assessment of the sustainability of individual segments of the Baltic fishing fleet.

1. Results for segment VL0010PG (vessels up to 10 m in overall length, fishing with nets and other passive gear):

- Biological indicators (2018):
  - ✓ sustainable harvest indicator: 2.29
  - ✓ stocks at risk indicator: 1
- Technical indicators (2018):
  - ✓ vessel utilisation indicator: 45% of kWdays and 45% of GT days
  - ✓ inactive fleet indicator: 5% of the total number of fishing vessels in the segment, meaning that 5% of GT and 3% of kW of those vessels were under-utilised
- Economic indicators (2017):
  - ✓ return on investment (ROI) indicator: -8.06%,
  - ✓ current revenue/break-even revenue (CR/BER) indicator: -1.43%

A deteriorating trend can clearly be seen from the biological indicators for segment VL0010 PG. Between 2016 and 2018 the indicators were above the recommended level. The fishing capacity of segment VL0010 PG therefore cannot be considered sustainable relative to available fishing opportunities. Nevertheless, the segment fails to meet the condition whereby a minimum of 40% of the catch value must come from stocks for which fishing mortality or F_{msy} has been determined.. According to the guidelines, the SHI indicator is therefore considered unavailable. For this reason, the indicator value calculated for those vessels (as shown in Table 3) should be treated as supplementary and not be taken into account when assessing the segment's sustainability.

This segment is characterised by continued low capacity utilisation by fishing vessels (the lowest in the fleet). Despite improving in 2018, the indicator remained below the reference value (70%).

The segment was profitable in 2016, which ensured a positive return on invested capital (6.21% ROI) against the negative value of the indicator in 2015 of -4.98%. As expected, the improvement in the indicator was minor (caused by external factors such as the drop in fuel prices and an increase in fish prices). Moreover, in 2017, the segment recorded a negative indicator value (-8.06%). Similarly, the current revenue/break-even revenue (CR/BER) indicator was negative, with a reference value of >1. In 2017, the catch value for this segment decreased by 15%. The catch volume decreased further in 2018, with a considerable fall in the herring catch, for reasons which include a long period of ice cover over lagoons. As a consequence, the catch value for such fish decreased by as much as 70%. However, due to an increase in revenue from freshwater fish, including bream (+ 40%) and cod (+ 17%), the overall catch value for the segment decreased by only 11% in 2018.

In conclusion, **segment VL0010PG is clearly unsustainable in terms of the available fishing opportunities and is not economically viable**.

2. Results for segment VL1012PG (vessels between 10 m and 12 m in overall length, fishing with nets and other passive gear):

- Biological indicators (2018):
  - ✓ sustainable harvest indicator: 2.59
  - ✓ stocks at risk indicator: 2
- Technical indicators (2018):
  - ✓ vessel utilisation indicator: 45% of kWdays and 46% of GT days
  - ✓ inactive fleet indicator: 13% of the total number of fishing vessels, meaning that 9% of GT and 9% of kW of vessels from this length category were under-utilised
- Economic indicators (2017):
  - ✓ return on investment (ROI) indicator: -4.55 %,
  - ✓ current revenue/break-even revenue (CR/BER) indicator: -0.11%

The poor financial situation of this fleet segment can be seen from the indicators presented above, the segment's reliance on overfished stock (the sustainable harvest indicator for 2016-18 was significantly higher than 1), the fact that the stocks at risk indicator remained at level 2 in 2018, the continued deficit (negative ROI during the three years under review) and the persistently low CR/BER indicator (below 0 in 2017). Likewise, the values for biological indicators were poor.

As in previous years, the segment in question had a high inactive vessel indicator (the highest of all segments) in 2018. The segment of vessels between 10 m and 12 m in length was one of the few segments to increase in size during the fleet scrapping programme and the only segment to do so from that class. Between 2004 and 2018, the number of vessels in that segment increased from 91 to 132. This was mainly caused by vessels of <10 m 'transitioning' to the segment following hull reconstruction works due to higher catch limits for cod.

Segment VL1012 PG is clearly unsustainable in terms of the available fishing opportunities and is not economically viable.

3. Results for segment VL1218DFN (vessels between 12 m and 18 m in overall length, fishing with nets):

- Biological indicators (2018):
  - ✓ sustainable harvest indicator: 2.82
  - ✓ stocks at risk indicator: 1
- Technical indicators (2018):
  - ✓ vessel utilisation indicator: 49% of kWdays and 47% of GT days
  - ✓ inactive fleet indicator for vessels between 12 m and 18 m length (fleet segments DFN and DTS): 9 % of the total number of fishing vessels, meaning that 5% of GT and 6% of kW of vessels from this length category were under-utilised,
- Economic indicators (2017):
  - ✓ return on investment (ROI) indicator: 0.95 %,
  - ✓ current revenue/break-even revenue (CR/BER) indicator: 1.15%.

In 2018, the segment in question became more reliant on overfished stocks (between 2016 and 2018 the sustainable harvest indicator was significantly above 1). The stocks at risk indicator was at the same level as it was in 2017 (1).

The ROI indicator improved further (0.95% in 2017, -0.83 % in 2016, -1.32% in 2015), with the segment becoming profitable in 2017. The CR/BER indicator also improved (1.15 in 2017, 0.75 in 2016, 0.65 in 2015), meaning further improvement in the cost/revenue ratio, in particular as regards covering variable costs. In 2017, despite revenue from fishing remaining at a similar level, the number of vessels in the segment fell from 27 to 22, and, in the following year, to just 10. This was largely the result of vessels moving to the DTS segment. Moreover, in 2017, revenue from salmonid fishing increased considerably (from 17% to almost 40%) in segment VL1218DFN.

Based on the analysis carried out, **segment VL1218DFN is unsustainable in terms of the available fishing opportunities, as can be seen from the biological indicators for this segment**.

The situation is more ambiguous as regards the economic indicators. The CR/BER indicator was satisfactory in 2017, whereas the ROI indicator was slightly below the level corresponding to the option for alternative investment.

4. Results for segment VL1218 DTS (bottom trawlers between 12 m and 18 m in overall length):

- Biological indicators (2018):

- ✓ sustainable harvest indicator: 2.37
- ✓ stocks at risk indicator: 2

❖ Technical indicators (2018):
- ✓ vessel utilisation indicator: 60% of kWdays and 60% of GT days
- ✓ inactive fleet indicator: 9% of the total number of fishing vessels, meaning that 5% of GT and 6% of kW of vessels from this length category were under-utilised

❖ Economic indicators (2017):
- ✓ return on investment (ROI) indicator: 5.33%,
- ✓ current revenue/break-even revenue (CR/BER) indicator: 1.66%.

In 2018, the biological indicators in respect of the sustainability of segment capacity deteriorated. The sustainable harvest indicator deteriorated compared with 2017 (2.37 as opposed to 1.87 in 2017). On the basis of the value of this indicator, segment VL1218DTS relies on overfished stocks which are exploited at a level in excess of F_{MSY}. Segment VL1218DTS had a stocks at risk indicator value of 2 in 2018.

Despite their lower value, the economic results can be assessed as positive. The ROI indicator fluctuated during the period in question (5.33% in 2017, 13.07% in 2016 and 20.36% in 2015). The CR/BER indicator further demonstrated a sound financial situation, with a positive ratio in terms of revenue covering costs. In 2017, segment revenue was approximately 1.5 times the break even point.

Taking into account the biological indicator values, **fishing capacity in segment VL1218DTS is not resource sustainable relative to available fishing opportunities.**. Despite deteriorating, the economic indicators for the segment suggest its economic situation is sound.

5. Results for segment VL1824DTS (bottom trawlers between 18 m and 24 m in overall length):

❖ Biological indicators (2018):
- ✓ sustainable harvest indicator: 2.16
- ✓ stocks at risk indicator: 2

❖ Technical indicators (2018):
- ✓ vessel utilisation indicator: 58 % of kWdays and 58 % of GT days
- ✓ inactive fleet indicator: 4 % of the total number of fishing vessels, meaning that 5% of GT and 3 % of kW of vessels from this length category were under-utilised

❖ Economic indicators (2017):
- ✓ return on investment (ROI) indicator: 3.33 %,
- ✓ current revenue/break-even revenue (CR/BER) indicator: 1.32%.

As with segment VL1218DTS, the stocks at risk indicator for segment VL1824DTS during the years in question is 2. The segment also relies on overfished stocks which are exploited above F_{msy} (between 2016 and 2018, the sustainable harvest indicator was considerably higher than 1). In 2018, the indicator increased again, demonstrating further deterioration in catch sustainability.

As in previous years, the segment was characterised by its profitability. In 2017, both

economic indicators improved and were above the reference values. The vessels utilisation rate deteriorated slightly, whilst the inactive fleet indicator improved.

The fishing capacity of segment VL1824 DTS has proven to be unsustainable relative to available fishing opportunities. However, the financial performance of the fleet segment indicates a relatively satisfactory economic situation.

Disregarding the sound financial performance, **the biological indicators for segment VL1824DTS during the years in question demonstrate a persistent lack of catch sustainability and a reliance on overfished stocks, indicating that the segment is unsustainable**.

6. VL1824TM segment performance (pelagic trawlers between 18 m and 24 m in overall length):

- Biological indicators (2018):
  - ✓ sustainable harvest indicator: 1.47
  - ✓ stocks at risk indicator: 0
- Technical indicators (2018):
  - ✓ vessel utilisation indicator: 49% of kWdays and 53% of GT days
  - ✓ inactive fleet indicator: 4% of the total number of fishing vessels, meaning that 5% of GT and 3% of kW of vessels from this length category were under-utilised
- Economic indicators (2017):
  - ✓ return on investment (ROI) indicator: 16.80 %,
  - ✓ current revenue/break-even revenue (CR/BER) indicator: 4.29%.

In 2017, the segment increased by two vessels, indicating that the segment remains attractive in terms of fishing activity. The vessels in the group depend largely on pelagic fish. In 2017, herring and sprat accounted for approximately 75% of revenue from fishing in segment. Cod continues to represent approximately 20% of the catch value. The SHI indicator did not reach the level corresponding to a sustainable harvest (below 1) during any of the periods analysed, suggesting that the segment relies on overfished stocks which are exploited above F_{MSY}. Conversely, the stocks at risk indicator was within safe limits, amounting to 0 in 2016-18.

Relative to other segments, the economic performance of segment VL1824 TM was very good during the period in question. In 2017, the ROI indicator was 16.8% which is far higher than the alternative options for capital investment but more moderate than in 2016 (26%). Moreover, the segment reported the highest CR/BER indicator in the entire fleet, with revenue at more than four times (4.29) the break even point.

In view of the above, **the fishing capacity of segment VL1824TM is marginally unsustainable relative to available fishing opportunities given the deviation of the SHI indicator from the recommended level**. The economic indicators are very strong, the ship utilisation indicator is poor (below 70%) and the inactive fleet indicator acceptable.

7. VL2440 TM segment performance (pelagic trawlers between 24 m and 40 m in overall length):

- Biological indicators (2018):

- ✓ sustainable harvest indicator: 1.29
- ✓ stocks at risk indicator: 0

❖ Technical indicators (2018):

- ✓ vessel utilisation indicator: 66% of kWdays and 66% of GT days
- ✓ inactive fleet indicator: 0% of the total number of fishing vessels, 0 GT and 0kW

❖ Economic indicators (2017):

- ✓ return on investment (ROI) indicator: 11.16%,
- ✓ current revenue/break-even revenue (CR/BER) indicator: 2.26%.

As was the case with the previous segment, vessels belonging to segment VL2440TM recorded a sustainable harvest indicator greater than 1 during the period in question. This represented a slight increase on the previous year.. In line with the guidelines, despite exceeding the indicator by less than all other segments, every year the segment relies on overfished stocks which during the years in question are exploited above F_{msy}.

This was mitigated by the stocks at risk indicator which was at 1 for 2015-17 and 0 in 2018. The economic indicators for the group of vessels analysed were positive and, importantly, stable. The ROI indicator for 2015-18 was 13.05% in 2015, 12.60% in 2016, and 11.16% in 2017. In other words, it was far higher than the next best alternative. As was the case for the ROI indicator, the CR/BER indicator exceeded 1 in 2015-17. This demonstrated there is a sound cost-revenue structure (2.26 in 2017, 2.21 in 2016 and 1.83 in 2015).

During the period under review, the segment comprises 44 fishing vessels. The vessel utilisation rate was the highest in the fleet (66% GT and 66% kWdays in 2018). In 2018, there were no inactive vessels in the segment's length category.

In conclusion, segment VL2440TM slightly exceeded one of the biological indicators due to its biological parameters (SHI),
whilst being economically stable and achieving a high
level technical fleet capacity use.

Catch by fleet segment

The performance of the Polish fishing fleet operating in the Baltic Sea improved to a noticeable degree in 2018. The total catch volume increased by 15% compared with 2017. Of the key fish species, the greatest increase in catch volume was for flounder (+38%), herring (+19%) and sprat (+ 9%). By contrast, the cod catch fell (-8%) as a direct result of the deteriorating status of the stock and the individual condition of the fish (small, low weight). The poor conditions for cod fishing was one of the factors which led to the increased interest in flounder. The same vessel segments fish both species. However, the big increase in landings of flat fish was also brought about by vessels targeting mainly pelagic catch (VL2440TM). In 2018, cutter trawlers, which specialise mainly in fishing Clupeidae (herring and sprat), caught approximately 3000 tonnes of flounder, accounting for 1/5 of landings for the year. By comparison, flounder accounted for only 11% in 2017 and 15% in 2016.

In 2018, the catch volume for **herring** was approximately 20% higher than in 2017. Large fishing vessels were mainly responsible for this increase. Segment VL1824TM caught almost 50 % more herring than the previous year. A similarly large increase (+ 39%) was seen in the

herring catch taken by vessels in segment VL1824DTS. Vessels belonging to this segment target predominantly demersal fish. However, due to the aforementioned collapse in cod stocks, they are increasingly targeting pelagic fish. The herring catch taken by the smallest fleet segments (VL0010PG and VL1012PG) declined considerably in 2018. This was mainly due to the long period of ice cover over the Vistula Lagoon and, therefore, the late start to the herring spawning season in those waters.

In 2018, **sprat** landings increased by 9% compared with 2017. Sprat has become increasingly popular among a wide group of fishing vessels since 2013 when the price increased significantly. The largest vessels (segment VL2440TM) specialise in fishing sprat and catch approximately 70-75% of the Polish quota. Interestingly, smaller vessels also target sprat each year. In 2018, pelagic cutter trawlers in segment VL1824 caught 14% more sprat, and cutter trawlers in segment VL1824DTS caught 17% more sprat than the previous year. Attractive prices, reduced labour intensity and sound fishing productivity were the main drivers behind the increased catch.

As stated earlier, from a fishing revenue perspective, the most important species targeted by Polish fishermen – whose catch volumes decreased in 2018 as compared with 2017 – is cod. The decline in cod catch volumes was noticeable in all fleet segments. Vessels in segment VL1218DFN, which mostly fish using nets, were most affected (-62%). Vessels belonging to segment VL1824TM caught significantly less cod than the year before (-37%). In this instance, the decline in interest for this species was due not only to the poor condition of the stock but also to the year-on-year increase in the catch of pelagic fish.

Table 10: Catch volumes by segment for the key fish species for 2016-18

Segment	Species	2016	2017	2018	2018/2017
VL0010 PG	Herring	3 240.6	2 261.7	1 119.8	-50%
	Sprat	1.4	0.4	0.6	30%
	Flounder	1 260.8	939.9	1 187.2	26%
	Cod	715.0	501.1	564.6	13%
	Other	3 275.0	2 779.3	3 085.6	11%
Total VL0010 PG		**8 492.8**	**6 482.3**	**5 957.8**	**-8%**
VL1012 PG	Herring	746.2	922.8	675.8	-27%
	Sprat	1.9		0.2	
	Flounder	1 728.5	1 840.3	2 492.6	35%
	Cod	1 340.0	1 032.5	1 236.1	20%
	Other	183.5	216.2	543.7	151%
Total VL1012 PG		**4 000.0**	**4 011.8**	**4 948.4**	**23%**
VL1218 DFN	Herring	85.2	129.3	8.3	-94%
	Sprat	100.2	393.1	0.0	-100%
	Flounder	315.7	117.8	90.0	-24%
	Cod	887.4	601.3	228.5	-62%
	Other	73.3	112.8	69.3	-39%
Total VL1218 DFN		**1 461.8**	**1 354.2**	**396.1**	**-71%**
VL1218 DTS	Herring	1 913.1	1 182.4	1 120.7	-5%
	Sprat	2 334.6	1 754.8	1 858.3	6%
	Flounder	6 925.1	4 511.2	5 387.1	19%
	Cod	3 417.1	2 354.0	2 274.8	-3%
	Other	4 281.8	1 105.5	1 009.1	-9%
Total VL1218 DTS		**18 871.9**	**10 907.9**	**11 650.0**	**7%**
VL1824 DTS	Herring	1 854.6	1 703.6	2 364.3	39%
	Sprat	4 343.6	3 159.8	3 684.7	17%
	Flounder	2 051.6	1 811.2	2 771.2	53%
	Cod	2 266.2	1 813.4	1 730.0	-5%
	Other	647.0	368.9	583.1	58%
Total VL1824 DTS		**11 163.0**	**8 856.9**	**11 133.2**	**26%**
VL1824 TM	Herring	6 945.0	6 817.6	10 001.7	47%
	Sprat	11 274.9	11 909.9	13 538.8	14%
	Flounder	588.2	697.5	501.3	-28%
	Cod	1 066.8	847.5	534.5	-37%
	Other	258.7	126.9	150.3	18%
Total VL1824 TM		**20 133.6**	**20 399.4**	**24 726.5**	**21%**
VL2440 TM	Herring	29 271.0	30 654.2	36 782.4	20%
	Sprat	42 000.6	52 753.7	56 939.5	8 %
	Flounder	2 190.1	1 287.9	2 980.1	131%
	Cod	642.4	303.3	267.6	-12%
	Other	672.1	724.0	1 983.9	174%
Total VL2440 TM		**74 776.2**	**85 723.0**	**98 953.5**	**15%**
Total		**138 899.3**	**137 735.5**	**157 765.5**	**15%**

X. Action Plan

The biological, technical and economic indicators for the Polish Baltic fleet as presented in Chapter VIII, Section F: 'Estimation and discussion of balance indicators' and Chapter IX: 'Analysis and evaluation of the balance between fishing capacity and fishing opportunities by fleet segment over three consecutive years' show that the individual segments of the Polish fishing fleet do not balance effectively with the available fishing opportunities. As a result, an action plan has been drawn up pursuant to Article 22(4) of Regulation (EU) No 1380/2013.

In order to ensure that the fishing capacity of the fleet is in balance with the available fishing opportunities (resources), and taking into account the need to ensure that fishing activity is carried out in a sustainable and effective manner, appropriate steps must be taken to achieve this balance.

Accordingly, the fleet segments presented below are covered by the programme for **temporary cessation of fishing activity** referred to in Article 33 of Regulation (EU) No 508/2014 to be co-financed under the 'Fisheries and the Sea' Operational Programme (2014-20 FISH OP) by the European Maritime and Fisheries Fund:

- **VL0010 PG** - vessels up to 10 m in overall length using nets and other passive gear,
- **VL1012 PG** - vessels between 10 m and 12 m in overall length using nets and other passive gear,
- **VL1218 DFN** - vessels between 12 m and 18 m in overall length using nets,
- **VL1218 DTS** - bottom trawlers between 12 m and 18 m in overall length,
- **VL1824 DTS** - bottom trawlers between 18 m and 24 m in overall length,
- **VL1824 TM** (pelagic trawlers between 18 m and 24 m in overall length),

As presented in Chapter IX of this report, segment **VL0010 PG** is clearly unsustainable relative to available fishing opportunities (clear deteriorating trend among biological indicators) and is not economically viable. Segment **VL1012 PG** is also clearly unsustainable relative to available fishing opportunities and is not economically viable. The value of the sustainable harvest indicator showed that the segment relies on overfished stock (the indicator for 2016-18 was higher than 1), whilst the stocks at risk indicator remained at 2 for the second consecutive year. Segment **VL1218 DFN** is unsustainable relative to available fishing opportunities, as demonstrated by its poor biological indicators. The fishing capacity of segment **VL1218 DTS** is not resource sustainable relative to available fishing opportunities, as demonstrated by the negative trend in its sustainable harvest and stocks at risk indicators over three consecutive years. The fishing capacity of segment **VL1824 DTS** has proven to be unsustainable relative to available fishing opportunities. The biological indicators for the segment demonstrate a persistent lack of catch sustainability and a reliance on overfished stocks. The fishing capacity of segment **VL1824 TM** is marginally unsustainable relative to available fishing opportunities given the deviation of the SHI indicator from the recommended level (the segment relies on overfished stocks which are exploited above F_{msy}).

In accordance with Regulation (EU) No 508/2014, aid for temporary cessation of fishing activities will concern Polish fishing vessels which have carried out fishing activities in the Baltic Sea for at least 120 days during the last two calendar years preceding the date of

submission of the application for support.

Support will be granted for a maximum duration of six months per vessel during 2014 to 2020. If the support is granted for a specified period, all fishing activities carried out by the fishing vessel or fishermen concerned will be effectively suspended.

Segment **VL2440 TM** (pelagic trawlers between 24 m and 40 m in overall length), which has a sustainable harvest indicator that slightly exceeds the recommended level, will not be subject to any measures for temporary cessation of fishing activity. Fishing vessels between 24 m and 40 m in overall length are used to fish for pelagic stocks, mainly herring and sprat. Notably, the Council of the European Union has increased catch quotas for sprat over the last two calendar years, indicating that the condition of this stock is satisfactory.

Bearing in mind that the fishing vessels in the aforementioned segment target pelagic fish, restricted cod quotas were allocated to those vessels under national legislation on the allocation of general fishing quotas.

Individual cod quotas of 17 708 kg were allocated to eligible vessels between 24 m and 25.49 m in overall length.

However, fishing vessels of 25.50 m and above in overall length have an Olympic (common) cod quota allocated for possible by-catch amounting to 150 tonnes and no more than 10 tonnes per fishing vessel. As a result, those vessels would not be exerting excessive pressure on the species.

In view of the above, it is clear that the fishing vessels from segment VL2440 TM should not be subject to corrective action such as temporary cessation of fishing activity, due to the stable economic situation and the state of the fish stocks targeted by them.

Fisheries Department
Ministry of the Maritime Economy
and Inland Waterways