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Scientific, Technical and Economic Committee for Fisheries (STECF) - Assessment of balance indicators for key fleet segments and review of national reports on Member States efforts to achieve balance between fleet capacity and fishing opportunities (STECF-17-18)

Edited by Giuseppe Scarcella, Natacha Carvalho and John Casey

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Abstract

Commission Decision of 25 February 2016 setting up a Scientific, Technical and Economic Committee for Fisheries, C(2016) 1084, OJ C 74, 26.2.2016, p. 4–10. The Commission may consult the group on any matter relating to marine and fisheries biology, fishing gear technology, fisheries economics, fisheries governance, ecosystem effects of fisheries, aquaculture or similar disciplines. This report was reviewed by the STECF by Plenary (PLEN-17-03), 6-10 November 2017.

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Ulrich, C., Abella, J. A., Andersen, J., Arrizabalaga, H., Bailey, N., Bertignac, M., Borges, L., Cardinale, M., Catchpole, T., Curtis, H., Daskalov, G., Döring, R., Gascuel, D., Knittweis, L., Malvarosa, L., Martin, P., Motova, A., Murua, H., Nord, J., Prellezo, R., Raid, T., Sabatella, E., Sala, A., Scarcella, G., Soldo, A., Somarakis, S., Stransky, C., van Hoof, L., Vanhee, W., Vrgoc, Nedo.

EWG-17-08 report:

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Request to the STECF

STECF is requested to review the report of the STECF Expert Working Group meetings, evaluate the findings and make any appropriate comments and recommendations.

STECF response

STECF reviewed the report of EWG 17-08 and notes that the terms of reference were addressed to the extent possible during the meeting. Inferences regarding the assessment of balance between fishing capacity and fishing opportunities presented in the report are in accordance with the specifications for interpretation of indicator values given in the 2014 guidelines (COM (2014) 545 Final).

STECF notes that the definition of the SAR indicator makes it unsuitable for assessing trends, as concluded in STECF 15-02 and 15-15 reports.

STECF notes that determination of balance between fishing opportunity and fleet capacity is partly based on preferences and value judgements relating to social matters and has no directly observable objective unit of measurement. STECF has detailed several concerns in previous reports [STECF-15-02, starting at p.9, STECF-15-15, starting at p.9], and reiterates that balance indicators should only be used to highlight fleet segments which might have been out of balance with their fishing opportunities, and which might warrant further consideration and investigation to determine whether there is a problem with balance that might require an action plan. The indicator values (individually or in combination) cannot be considered reliable metrics to identify which fleet segments require an action plan.

STECF considers that the current methodology, used since 2014 including in the present EWG 17-08 report is of limited use in assessing the balance between fleet capacity and fishing opportunity and are not sufficient to determine the need for an action plan to address any imbalance indicated.

STECF conclusions

STECF concludes that the guidelines on balance indicators (COM (2014) 545 Final) should be revised in line with previous advice, taking into account concerns and proposals in previous EWG reports [STECF-15-02, STECF-15-15] and Annex 1 of the report by EWG 16-09. This revision would enable scientific expertise to be better employed to assist the Commission and Member States in meeting their obligations under Article 22 of the CFP (Regulation (EU) No 1380/2013).

References

Scientific, Technical and Economic Committee for Fisheries (STECF) – Assessment of balance indicators for key fleet segments and review of national reports on Member States efforts to achieve balance between fleet capacity and fishing opportunities (STECF-15-02). 2015. Publications Office of the European Union, Luxembourg, EUR 27134 EN, JRC 94933, 147 pp.

Scientific, Technical and Economic Committee for Fisheries (STECF) – Assessment of balance indicators for key fleet segments and review of national reports on Member States efforts to achieve balance between fleet capacity and fishing opportunities (STECF-15-15). 2015. Publications Office of the European Union, Luxembourg, EUR 27555 EN, JRC 97991, 160 pp.

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[1] - Information on STECF members' affiliations is displayed for information only. In any case, Members of the STECF shall act independently. In the context of the STECF work, the committee members do not represent the institutions/bodies they are affiliated to in their daily jobs. STECF members also declare at each meeting of the STECF and of its Expert Working Groups any specific interest which might be considered prejudicial to their independence in relation to specific items on the agenda. These declarations are displayed on the public meeting's website if experts explicitly authorized the JRC to do so in accordance with EU legislation on the protection of personnel data. For more information: http://stecf.jrc.ec.europa.eu/adm-declarations

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REPORT TO THE STECF

EXPERT WORKING GROUP ON

Assessment of balance indicators for key fleet segments and review of national reports on Member States efforts to achieve balance between fleet capacity and fishing opportunities

(EWG-17-08)

Larnaca, Cyprus, 18-22 September 2017

This report does not necessarily reflect the view of the STECF and the European Commission and in no way anticipates the Commission's future policy in this area

1 INTRODUCTION

Expert working group EWG-17-08 was convened under STECF to assess balance indicators for EU Member State fleet segments, review national reports on Member States efforts to achieve balance between fleet capacity and fishing opportunities, and assess action plans submitted for fleet segments where Member States identified structural overcapacity. EWG-17-08 was held in Larnaca, Cyprus from the 18 – 22 September 2017.

Independently-calculated balance indicators, based on DCF economic and transversal data and stock assessment information were provided to experts, and the evaluation of these balance indicators is reported here. In addition to evaluating the balance indicators per se, experts considered a number of recurring issues and caveats related to biological, economic, and technical indicators. Action plans submitted by Member States for fleet segments with identified structural overcapacity as identified by the Member States in their fleet capacity reports in line with Article 22.4 of Regulation (EU) 1380/2013 were evaluated, and the assessment is presented here.

1.1 Terms of Reference for EWG-17-08

The following terms of reference were agreed by DG Maritime Affairs and Fisheries (DG-MARE) and the chair of the expert working group:

Background

The Commission requests that an analysis of balance between fleet capacity and fishing opportunity be made using a standard approach across all EU fleet segments and based on DCF information. Where possible, evaluation should use data reference year 2009 to 2015.

Terms of Reference:

1. **Based on the data submitted by Member States under the 2017 DCF Economic data call and the most recent assessments and advice from relevant scientific bodies on stock status and their exploitation rates, compute values for the tech-nical, economic and biological indicators specified in the European Commission Guidelines (COM 2014, 545 final)[1] .**

JRC will provide tabulated values (in the same format as the MS indicator tables in the STECF 16-09 data table for all indicators as detailed in items i) to vi) below, covering all MS fleet segments wherever the necessary data are available.

[1] COM (2014) 545 final. Communication from the Commission to the European Parliament and the Council. Guidelines for the analysis of the balance between fishing capacity and fishing opportunities according to Art 22 of Regulation (EU) No 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy.

Values for the following indicators to be provided as specified in the 2014 Balance Indicator Guidelines[1]:

(i) Sustainable harvest indicator (SHI)
(ii) Stocks at risk indicator (SAR)
(iii) Return on investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)
(iv) Ratio between current revenue and break-even revenue (CR/BER)
(v) The inactive fleet indicators
(vi) The vessel use indicator

For fleet segments for which the indicator values can be calculated, STECF is requested to present the trend over the last 5/6-year period and where relevant, to comment on any implications of such trends. STECF is also requested to comment on the reliability of data used in calculating the indicator values.

For fleet segments for which indicator values cannot be calculated, STECF is requested to explain why that is the case.

2. **'Review the fleet reports submitted by Member States under Article 22.2 / 22.3 of the CFP and assess whether the action plans under Article 22.4 of regulation (EU) 1380/2013 submitted by May 2017 with the Annual report on capacity cor-responding to the situation in 2016 have effectively set out "the adjustment tar-gets and tools to achieve a balance and clear time-frame for its implementation" in line with Article 22.4 of Regulation (EU) 1380/2013'.**

3. **Comment on the proposed measures in the new action plans under Article 22/4 of Regulation (EU) 1380/2013 submitted by Member States, together with their fleet reports on capacity corresponding to the situation in 2016, intended to ad-dress the imbalance as identified in any fleet segments additional to these identi-fied as imbalanced in the fleet report of capacity for 2015. Comments shall focus on whether the measures in the new action plans can be considered sufficient to balance the additional, imbalanced fleets.**

4. **For each Member State, list those fleet segments that according to the 2015 val-ues for either i) the SHI or ii) the SAR, as computed by the STECF, were indi-cated to be out of balance with their fishing opportunities together with the fish stocks on which such segments rely and the fishing area to which such segments are attributed. Separate lists should be provided for each indicator. The fish stocks on which a fleet segment is reliant shall be determined by ranking the landings from all stocks caught by that fleet segment in descending order in terms of landings value and listing those stocks that account for 75% of the total value of the landings by that fleet segment. The area to which a fleet segment is attributed shall be given as FAO area 27, FAO area 37 or other fishing region (OFR).**

   For corresponding fleet segments, compare the indicator values of the SHI and SAR as computed by the STECF with the values in the 2017 fleet reports from

Member States. Such a comparison should be restricted to indicator values for the year 2015.

2 GENERAL CONSIDERATIONS REGARDING THE ASSESSMENT OF 'BALANCE'

As far as possible the Expert group has explicitly addressed the terms of reference provided by the Commission which relate to the calculation and evaluation of balance indicators and the review of fleet reports from Member States and any associated action plans provided in accordance with the criteria specified in the 2014 Balance Indicator Guidelines to Member States (COM (2014) 545 FINAL) and Article 22 of regulation (EU) 1380/2013 to redress any imbalances between their fleet capacity and fishing opportunities.

In previous reports, the Expert Group has discussed at length and provided a detailed critique of the application and utility of the indicators and criteria specified in the 2014 Balance Indicator Guidelines (COM (2014) 545 FINAL) for assessing the balance between capacity and fishing opportunities. Furthermore, numerous suggestions for modification and improvement have also been provided in previous reports and all such criticisms and suggestions have been endorsed by the STECF. The Expert Group wishes to stress that all previous criticisms and suggestions remain valid and in particular draws the attention of the Commission to the following sections of previous reports:

- STECF report 15-02; sections 2.7, 2.8, 2.9;
- STECF report 15-15; 3.5.1, 3.6.1, 3.8, 3.9, 3.10, 3.11.
- STECF report 16-09; 4.2, 4.3, 4.4, 4.5.

The comments and suggestions given in the above report sections are intended to provide advice on how the guidelines to Member States (COM (2014) 545 FINAL) might be modified at some future date and lead to a more appropriate suite of indicators to inform Member States on the balance between capacity and fishing opportunities. In this context, the Expert Group wishes to draw attention to the concluding paragraph from STECF General Observations and Conclusions on the utility and appropriateness of balance indicators given in section 2 of STECF 15-15 which reads as follows:
"STECF acknowledges that there are no immediate plans by the Commission to revise the current suite of indicators or the Guidelines. Nevertheless, recognising that there may be a need to undertake such a revision at some future date, STECF suggests that it would be appropriate to commence investigating the properties and utility of alternative indicators at the earliest opportunity and well ahead of any decision on which indicators are to be used. The guidelines to Member States would then need to be revised accordingly and ideally include explicit instructions on precisely how indicator values should be calculated and how they should be interpreted in the context of the balance between capacity and fishing opportunities. STECF considers that the above work would best be undertaken by a dedicated Expert Working Group."

Furthermore, the Expert group wishes to stress that contrary to the criteria in the guidelines (COM (2014) 545 FINAL), the indicator values for all of the indicators being used to assess the balance between capacity and fishing opportunities merely inform on whether fleet segments should be scrutinised further to determine whether an action plan is warranted. The indicator values (either singly or in combination) cannot be considered reliable metrics to identify which fleet segments require an action plan.

In addition, the Expert Group also wishes to draw to the attention of the Commission the information in Annex I of this report which provides a summary of Indicator Issues and Suggested Actions arising from the previous meeting of this expert group.
Issues concerning Member States' Annual fleet reports and action plans.

EWG 17-08 is requested to comment on whether the measures in the new action plans can be considered sufficient to balance any additional imbalanced fleets identified. This was not possible for the majority of the action plans submitted by Member States, because the information required to undertake such an assessment was deficient or absent.

To assess whether the action plans can contribute to redressing any imbalance identified in the fleet report, EWG 17-08 suggests that Member State action plans should, at a minimum, contain the following information:

i. a clear statement on which fleet segments are considered to be imbalanced and why;
ii. specific objectives, i.e. that relate to those fleet segments that are identified as being imbalanced and/or the resources on which those segments are reliant;
iii. tools that are considered effective and are appropriate for the imbalanced fleet segments, e.g. by illustrating how the proposed tool will achieve the stated objectives;
iv. targets that are:
    (a) quantifiable,
    (b) specific to those fleet segments or resources identified, and
    (c) justified, e.g. by estimating the impact of the target proposed; and

v. a clearly stated, realistic timeframe to achieve the targets that are set.

EWG 17-08 suggests that Member States state whether any action plans are already in place, whether there have been any amendments to these action plans and specify what those amendments are. The EWG 17-08 also suggests that Member States should confirm that the action plans are being implemented and the progress of these in a section of their fleet reports.

In the following sections references to the 'fleet report for 2016' refers to the Annual fleet report delivered by each Member State in May 2017.

3 TOR 1 - ASSESSMENT OF BALANCE INDICATORS

3.1 Background

All indicators provided and used in the STECF EWGs 17-08 were calculated according to the 2014 Balance Indicator Guidelines (COM (2014) 545 final)[2]. The Commission's 2014 Balance Indicator Guidelines seek to provide a common approach for estimating the balance over time between fishing capacity and fishing opportunities according to Art 22 of Regulation (EU) No 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy.

3.2 Provision of Indicator Values

3.2.1 *Indicator Calculation Process*

JRC compiled a set of economic and technical indicators as part of STECF EWG 17-01 (Annual economic report 2017 of the EU fishing fleets – Part 1). During the Annual Economic Report (AER) 2017[3] (hereafter referred to as 'AER 2017') meetings indicators were quality checked, analysed and summarised for the period 2008-2016. The SAR indicator values were prepared under two ad hoc contracts and the SHI values were prepared a collaborative agreement.

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An expert group was convened from the 3th-5th July at the JRC in Ispra, Italy, and tasked with providing agreed balance indicator values in accordance with the methodologies outlined in the 2014 Balance Indicator Guidelines. Experts present at the preparatory meeting for EWG 17-08 (hereafter 'EWG 17-08 Prep. Meeting') (i) reviewed the results of biological indicator calculations for the areas / fleet segments they were familiar with, and (ii) reviewed indicator issues, problems and caveats which had been flagged by STECF 15-02 / STECF 15-15, and proposed measures to address these wherever feasible (see Annex I). Participants at the EWG 17-08 Prep. Meeting decided to adopt the 10th July 2017 as a cut-off date for the inclusion of additional or updated data from Member States / advice on stock status from the relevant advisory bodies / IUCN and CITES listings.

A table prepared by the JRC containing all the balance indicators by Member State (MS) and fleet segment (supra-region[4] + fishing technology + vessel length) was provided to EWG 17-08 on the second day of the meeting. Where available, data were provided for each year over the period 2008-2016. However a final table was produced on the last day of the meeting due to final SAR revisions.

[2] Communication from the Commission to the European Parliament and the Council – Guidelines for the analysis of the balance between fishing capacity and fishing opportunities according to Art 22 of Regulation (EU) No 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy COM(2014) 545 final.

[3] Scientific, Technical and Economic Committee for Fisheries (STECF) – The 2016 Annual Economic Report on the EU Fishing Fleet (STECF-17-12). 2017. Publications Office of the European Union, Luxembourg, EUR 28359 EN, JRC 107883, 492 pp.

[4] The DCF supra-regions are: (1) Area 27 = Baltic Sea, North Sea, Eastern Arctic, North Atlantic; (2) Area 37 = Mediterranean Sea and Black Sea; (3) OFR = Other Fishing Regions.

Table 4.2.1.1 - Indicators provided to experts at EWG 17-08

Indicator		Calculated by	Comments
Biological indicators	**SHI** Sustainable Harvest Indicator	Jerome Guitton	1. Calculated by landings value for 2008-2016 for every EU fleet segment for which data were available: • Data sources for stock assessment parameters included the ICES and ICCAT for fleet segments operating in Area 27. • For fleet segments operating in Area 37 the data sources far stock assessment parameters included: a. A database of STECF stock assessment results compiled by the JRC (accessible at: https://stecf.jrc.ec.europa.eu/dd/medbs/). Updated information on stock assessments carried out at FAO/GFCM working groups was not available and could thus not be included in SHI calculations. b. A list of GFCM stock assessment compiled during preliminary working group. c. ICCAT stock assessment • Updated information on assessments of stocks targeted by EU fleets in Distant Waters (OFR) and Outermost Regions was not available and could thus not be included in SHI calculations except for Tuna fisheries assessed by IOTC and ICCAT. 2. Coverage ratio was also provided to give the part of the landing values that are included in the SHI. This is a quality indicator and the higher the ratio is, the higher the validity of SHI. Values are not taken into consideration if the ratio is less than 40%. 3. TOR 4: a new output was described in the term of reference. For each Member State, those fleet segments that according to the 2015 values for either i) the SHI or ii) the SAR, as computed by the STECF, were indicated to be out of balance with their fishing opportunities together with the fish stocks on which such segments rely and the fishing area to which such segments are attributed were listed. Separate lists were provided for each indicator. The fish stocks on which a fleet segment is reliant were determined by ranking the landings from all stocks caught by that fleet segment in descending order in terms of landings value and listing those stocks that account for 75% of the total value of the landings by that fleet segment. The area to which a fleet segment is attributed was given as FAO area 27, FAO area 37 or other fishing region (OFR). This new indicator was developed for all the fleets.
	SAR Stocks at Risk Indicator	Dr. Armelle Jung	1. Calculated for 2009-2015 for all fleet segments for which data were available. 2. Dr. Jung selected the stocks at risk: • For fleet segments operating in Area 27, the most recent ICES Advice on fishing opportunities was

		Dr. Tommaso Russo	accessed through the ICES website (up to the cut-off date 30/06/2016). • For fleet segments operating in Area 37, the most recent GFCM SCSA / SAC and STECF stock assessment reports were taken into account. • For fleet segments operating in other areas (OFR), STECF stock assessment reports and RFMO reports were considered. • Additional information was taken from Council Regulations fixing annual fishing opportunities; from GFCM, ICCAT, IOTOC Resolutions; the CITES species list and the IUCN Red List for Actinopterygii and Elasmobranchii. 3. Dr. Russo implemented a routine in R to calculate the SAR indicator for MS fleet segments. The R script is avalaible in the ftp meeting.
Economic indicators	**ROI or RoFTA** The Return on Investment (ROI) or Return on Fixed Tangible Assets (RoFTA)	JRC	1. Calculated using the same principle as STECF EWG 16-18; the target reference value to which the indicator value is compared is the 2015 risk-free interest rate. The most recent 5-year average (2011-2015) was also used, as stipulated in the 2014 Balance Indicator Guidelines. 2. Calculated for years 2009-2014, the most recent year for which DCF economic data are available.
	CR / BER Current revenue as proportion of break-even revenue	JRC	1. Calculated for years 2009-2015, the most recent year for which DCF economic data are available.
Technical/inactivity indicators	**VUR** Fleet segment utilisation ratio Average Days at Sea / Maximum Days at Sea	JRC	1. Calculated for years 2009-2015 using the latest data submitted by MS during the 2017 DCF call for economic data. 2. Member States (MS) had provided either maximum observed days at sea (DAS) for each fleet segment or maximum theoretical DAS. 3. Due to several inconsistencies and/or relevant missing information in the data provided by some MS, the EWG also used the value of 220 maximum theoretical days at sea per fleet segment for all MS, as stipulated in the 2014 Balance Indicator Guidelines.
	Inactive vessels per length category	JRC	1. Number and proportion of inactive vessels, in number, GT and kW for years 2009-2016 based on the latest data submitted by MS during the 2017 DCF call for economic data.
Data sources: 2017 DCF Fleet Economic Data Call; EUROSTAT; ICES online stock assessment database; JRC STECF stock assessment database; CITES species list; IUCN Red List.			

3.2.2 Data Source and Coverage

The data used to compile the various indicators were collected under the Data Collection Framework (DCF), cf. Council Regulation (European Commission (EC) No 199/2008 of 25th February 2008), amended by the multiannual Union programme for the collection, management and use of data in the fisheries and aquaculture sectors for the period 2017-2019 (see the Commission Implementing Decision (EU) 2016/1251 of 12 July 2016 and the Council Regulation (EC) No 199/2008 on a framework for the collection of data in the fisheries sector). Technical and economic balance indicators were calculated using data submitted under the 2017 DCF call for fleet economic scientific data issued by DG MARE in January 2017. The two biological indicators (SHI and SAR indicator) were calculated based on DCF transversal (landings) data submitted under the same data call. Additional information needed to calculate the biological indicators was obtained from other sources (see Table 4.2.1.1).

The 2017 fleet economic data call requested transversal and economic data covering years 2008 to 2016. Capacity data (GT, kW, no. of vessels) was requested up to and including 2016, while employment and economic parameters were requested up to and including 2015. Most effort and all landings data were requested up to and including 2016, as well as, income from landings (non-mandatory) to allow for economic performance projections to be estimated for 2016. Landings and effort data for fleet segments operating in the Mediterranean & Black Sea region (i.e. Area 37) were requested at the GCFM-GSA level by the 2017 economic data call. This level of aggregation was requested to correctly allocate landings to the relevant stocks when calculating the biological balance indicators (see STECF 15-02 / 15-15 reports).

EWG 17-08 noted that data on the number of inactive vessels by length group was not provided for the year 2016 by Denmark and Greece. Furthermore, information on inactive vessels was not provided at the requested aggregation level 'supra-region' by Spain in 2015 and 2016, and Portugal in 2016. The lack of data on supra-region is particularly problematic for Spain since the Spanish fleet is active in all 3 supra-regions (Table 4.2.2.1).

In terms of the completeness of the Member States data submissions, the AER 2017 report remarks ("Data issues" page 480) that most countries submitted the majority of the parameters requested under the call. In overall, there has been an improvement in the data quality and coverage compared to previous years despite some discrepancies make an evaluation of the overall economic performance of the EU fishing fleet in 2016 impossible. In many cases missing data relates to fleet segments with low vessel numbers. As 'maximum days at sea by fleet segment' is not a DCF parameter, it is requested and submitted through the data call on a voluntary basis.

In terms of data quality, inevitably some 'abnormal' or unexpected estimates for various indicators were detected by JRC or the AER experts during the 4 steps procedure implemented for this data checking (AER2017, p478), and in many cases were rectified by the Member States.

For most of the MS, there are no major data transmission issues at least for the balance indicators calculation. If data are missing, they are often related to few fleet segments containing small number of vessels (confidentiality reasons). For instance, due to the reduced number of vessels and/or enterprises, many Baltic States do not deliver sensitive data on their distant-water fleets.

However, some coverage and quality issues remained outstanding. Some general data issues highlighted in the AER 2017 include, but are not limited to, the following:

- Substantial amounts of data are missing for Greece (which have been excluded from the 2015 aggregated analysis in the AER 2017) and Spain.
- Data issues remain but significant effort was made in the recent years for Bulgaria, France and Ireland.

Table 4.2.2.1 Number of inactive vessels by length group for each Member State in 2015 and 2016

INACTIVE VESSELS 2015		BEL	BGR	CYP	DEU	DNK	ESP	EST	FIN	FRA	GBR	GRC	HRV	IRL	ITA	LTU	LVA	MLT	NLD	POL	PRT	ROU	SVN	SWE	Total
AREA27	VL0010				378	440			1,041	150	1,691			565		35	59		131	33	3,732			250	7,687
	VL1012				8	9			97	16	71			87		3			10	25	67			33	409
	VL1218				10	8		2	2	4	38			15		1			19	7	109			13	210
	VL1824				7	2				1	12			7		1			11	1	31				64
	VL2440	6			1						25			7		4			20	2	40				104
	VL40XX									1	7								12		10				30
	Total	**6**			**404**	**459**		**2**	**1,140**	**172**	**1,844**			**681**		**44**	**59**		**203**	**68**	**3,989**			**296**	**8,504**
AREA37	VL0006		278	31						82		357	1,781		344			132				4	46		3,055
	VL0612		487	32						140		784	3,062		589			103				20	31		5,248
	VL1218		7	1						2		69	105		116			10					3		313
	VL1824		3	1						3			35		29			7					1		79
	VL2440									4			43		11			6							64
	VL40XX									3					1										4
	Total		**775**	**65**						**234**		**1,210**	**5,026**		**1,090**			**258**				**24**	**81**		**8,763**
OFR	VL0010									732											326				1,058
	VL1012									38											3				41
	VL1218																				5				5
	VL1824									10											6				16
	VL2440														2						5				7
	VL40XX															2									2
	Total									**780**					**2**	**2**					**345**				**1,129**
NONE	VL0010						1,031																		1,849
	VL1012						35																		52
	VL1218						53																		71
	VL1824						15																		24
	VL2440						42																		43
	VL40XX						9																		9
	Total						**1,185**																		**2,048**
Total		**6**	**775**	**65**	**404**	**459**	**1,185**	**2**	**1,140**	**1,186**	**1,844**	**1,210**	**5,026**	**681**	**1,092**	**46**	**59**	**258**	**203**	**68**	**4,334**	**24**	**81**	**296**	**20,444**

INACTIVE VESSELS 2016		BEL	BGR	CYP	DEU	ESP	EST	FIN	FRA	GBR	HRV	IRL	ITA	LTU	LVA	MLT	NLD	POL	PRT	ROU	SVN	SWE	Total
AREA27	VL0010				343			1,390	150	1,625		509		42	73		135	30				237	4,191
	VL1012				12			102	16	61		73		4			9	23				30	318
	VL1218	3			7		4	1	4	39		12		1			20	7				6	97
	VL1824	4			7				1	17		4		1			13	2					42
	VL2440	2			2					23		5		5			18	1				6	60
	VL40XX								1	4							8					2	15
	Total	**9**			**371**		**4**	**1,493**	**172**	**1,769**		**603**		**53**	**73**		**203**	**63**				**281**	**4,723**
AREA37	VL0006		241	29					80		989		337			152				4	51		1,883
	VL0612		463	40					140		1,292		586			117				21	33		2,692
	VL1218		6	1					2		111		115			5				1	3		244
	VL1824		2						3		35		29			4					1		74
	VL2440								4		39		10			5							58
	VL40XX								3														3
	Total		**712**	**70**					**232**		**2,466**		**1,077**			**283**				**26**	**88**		**4,954**
OFR	VL0010								737														737
	VL1012								38														38
	VL1824								10														10
	VL40XX													2									2
	Total								**785**					**2**									**787**
NONE	VL0010					930													3,975				5,248
	VL1012					44													62				118
	VL1218					74													120				201
	VL1824					11													37				55
	VL2440					40													33				75
	VL40XX					6													6				12
	Total					**1,105**													**4,233**				**5,709**
Total		**9**	**712**	**70**	**371**	**1,105**	**4**	**1,493**	**1,189**	**1,769**	**2,466**	**603**	**1,077**	**55**	**73**	**283**	**203**	**63**	**4,233**	**26**	**88**	**281**	**16,173**

3.2.3 Fleet Segment Coverage

As reported above, the estimation of the balance indicators requires multiple data coming from different sources. As data are not available for all fleet segments, the balance indicators are calculated for a percentage of the EU fleet. This percentage depends on the specific indicator and its data needs. For instance, the VUR indicator needs data on the maximum days at sea, which are provided by MSs on a voluntary basis. When these data are not provided, the indicator cannot be calculated. On the other hande, the calculation of the SHI > 40% indicator depends on the number of stocks assessed in a specific fishing area. When this number is limited, the indicator cannot be calculated for the fleet segments exploiting that area.

To provide a measure per MS of the percentage of fleet segments for which an indicator is calculated, the landings value of these fleet segments is divided by the total landings value of the MS fleet. The use of the landings value instead of the number of fleet segments to calculate these percentages is aimed to consider the different weight of the fleet segments at MS level.

Table 4.2.3.1 shows the values of these percentages for each indicator and MS. Assuming that data on landings value are available for all fleet segments, a value of 100% means that the indicator is calculated for all fleet segments or, equivalently, for a number of fleet segments covering 100% of the MS landings value. This means that the data required to calculate that indicator are available for all fleet segments.
Values for the SHI indicator are reported in the table for (i) SHI values that were calculated for all stocks with assessment data, even if the proportion of landings value of the assessed stocks made up less than 40% of the total landings value of the fleet segment (in such cases, the indicator is considered as unrepresentative/unreliable), and (ii) SHI values calculated only for those fleet segments for which the proportion of landings value of the assessed stocks made up more than 40% of the total landings value of the fleet segment. For the SAR indicator, all fleet segments with corresponding landings data were screened for stocks falling under the definition of stocks at risk; all of the landings (in weight) data provided by MS were thus considered in the SAR analysis.

Table 4.2.3.1 Coverage of each balance indicator in terms of landed value submitted by MS for the reference year 2015. SHI = coverage of fleet segments for which SHI could be calculated; SHI 40%+ = coverage of fleet segments where proportion of landings value of the assessed stocks made up more than 40% of the total landings value of the fleet segment.

	Vessel utilisation ratio (VUR)	VUR using 220 days	Stocks-at-risk indicator (SAR)*	Sustainable harvest indicator (SHI)	SHI >40% +	Current revenue / break-even revenue	Return of fixed tangable assets (RoFTA)	Return on Investment (RoI)	Net profit margin (NPLm)
BEL	100%	100%	100%	100%	99%	100%	100%	0%	100%
BGR	100%	100%	100%	100%	66%	100%	100%	0%	100%
CYP	0%	100%	100%	100%	0%	100%	100%	0%	100%
DEU	64%	64%	100%	100%	76%	64%	64%	0%	64%
DNK	0%	100%	100%	98%	95%	100%	100%	100%	100%
ESP	100%	100%	100%	90%	54%	99%	99%	76%	99%
EST	63%	100%	100%	100%	75%	100%	100%	100%	100%
FIN	100%	100%	100%	100%	76%	100%	100%	0%	100%
FRA	100%	100%	100%	100%	41%	83%	83%	0%	83%
GBR	0%	100%	100%	99%	73%	100%	100%	100%	100%
GRC	0%	0%	100%	21%	0%	100%	100%	0%	100%
HRV	100%	100%	100%	100%	78%	100%	100%	0%	100%
IRL	98%	98%	100%	97%	82%	88%	88%	0%	88%
ITA	100%	100%	100%	100%	68%	100%	100%	0%	100%
LTU	96%	100%	100%	100%	4%	100%	100%	0%	100%
LVA	100%	100%	100%	100%	13%	100%	100%	0%	100%
MLT	100%	100%	100%	99%	61%	100%	100%	52%	100%

NLD	100%	100%	100%	100%	79%	100%	100%	98%	100%
POL	100%	100%	100%	100%	46%	100%	100%	0%	100%
PRT	98%	100%	100%	99%	16%	100%	100%	0%	100%
ROU	100%	100%	100%	100%	37%	100%	100%	100%	100%
SVN	100%	100%	100%	100%	12%	100%	100%	0%	100%
SWE	100%	100%	100%	100%	92%	100%	100%	0%	100%
EU total	76%	97%	100%	96%	60%	96%	96%	46%	96%
* All landings data submitted by MS were considered for the calaculation of the SAR indicator. However, where "No stock-at-risk" was found may be due to cases where the data submitted was not in the correct aggregation level to detect particular stocks and thus SAR coverage may be misleading.									

It is important to note that full coverage in the table above does not necessarily mean that the entire MS fleet is covered. It simply means that all the landings data that was submitted was covered. However, for confidentiality reasons, some MS may not provide landings data for specific fleet segments in cases where the data are considered sensitive and clustering of fleet segments may be insufficient to overcome breaching confidentiality rules. In some cases, only landings in weight are provided without the corresponding landed values for all active fleet segments reported by a MS. Indicator coverage is thus only relative to the data provided (value of landing), and should be considered together with the number of fleet segments and/or vessels.

In other cases, fleet segments are omitted entirely, i.e. not even capacity data are reported by MS. For instance, in the 2017 data call, Estonia and Latvia, which appear to have full coverage for most of the indicators, provided data only for their Baltic Sea fleets, since no data on their distant water fleets were submitted. In such cases, there is no way of knowing what the actual coverage would be because certain fleet segments are completely missing from the submitted DCF data. Information on active fleet segments in 2015 with missing landings in value that can be identified is presented in Table 4.2.3.2.

Table 4.2.3.2 Summary table showing for each Member State the number of fleet segments for which data on landings in value was available in 2015, the number of active fleet segments, and the active fleet segments in 2015 with missing landing values.

MS	MS	Number of Active fleet segments in 2015	Number of aggregated fleet segments in 2015	Data on value of landings in 2015	Format of data provision for Value of Landings in 2015	Landings data coverage in 2015	Fleet segments in 2015 with missing Value of Landings
BEL	Belgium	8	4	4	Aggregate fleet segment	Available for all fleet segments or aggregate fleet segments	
BGR	Bulgaria	23	16	23	Fleet segment	Available for all fleet segments	
CYP	Cyprus	6	6	6	Fleet segment	Available for all fleet segments (clustered before submission)	
DEU	Germany	21	14	14	Aggregate fleet segment	Available for all fleet segments or aggregate fleet segments	

MS	MS	Number of Active fleet segments in 2015	Number of aggregated fleet segments in 2015	Data on value of landings in 2015	Format of data provision for Value of Landings in 2015	Landings data coverage in 2015	Fleet segments in 2015 with missing Value of Landings
DNK	Denmark	19	19	19	Fleet segment	Available for all fleet segments (clustered before submission)	
ESP	Spain	88	59	87	Fleet segment	Missing for 1 fleet segment ESP A27 HOK VL2440, data possibly provided aggregated due to confidentiality	
EST	Estonia	7	4	7	Fleet segment	Available for all fleet segments	
FIN	Finland	9	5	5	Aggregate fleet segment	Available for all fleet segments or aggregate fleet segments	
FRA	France	99	65	94	Fleet segment	Missing for 2 fleet segments; the other 3 missing fleet segments (A27 PGP VL1218; A37 FPO VL1218; A37 MGO VL0006) are possibly provided aggregated due to confidentiality	FRA OFR FPO1012; FRA OFR PGP1012
GBR	United Kingdom	44	29	44	Fleet segment	Available for all fleet segments	
GRC	Greece	15	14	13	Fleet segment	Missing for 1 fleet segment; the other missing fleet segment GRC A37 HOK VL1824 is possibly provided aggregated due to confidentiality	GRC A37 FPO1218
HRV	Croatia	34	23	34	Fleet segment	Available for all fleet segments	
IRL	Ireland	32	22	32	Fleet segment	Available for all fleet segments	
ITA	Italy	35	24	24	Aggregate fleet segment	Available for all fleet segments or aggregate fleet segments	
LTU	Lithuania	10	5	10	Fleet segment	Available for all fleet segments	
LVA	Latvia	3	3	3	Fleet segment	Available for all fleet segments	
MLT	Malta	20	20	20	Fleet segment	Available for all fleet segments	
NLD	Netherlands	28	14	14	Aggregate fleet segment	Available for all fleet segments or aggregate fleet segments	

MS	MS	Number of Active fleet segments in 2015	Number of aggregated fleet segments in 2015	Data on value of landings in 2015	Format of data provision for Value of Landings in 2015	Landings data coverage in 2015	Fleet segments in 2015 with missing Value of Landings
POL	Poland	17	10	7	Aggregate fleet segment	Missing for 3 fleet segments; the other 7 fleet segments are possibly provided aggregated (POL A27 DTS VL1012; POL A27 TM VL1218; POL A27 DTS VL2440; POL A27 PMP VL1218; POL A27 PMP VL1824; POL A27 DTS VL0010; POL A27 TM VL40XX) due to confidentiality	POL A27 DTS40XX; POL A27 PG0010; POL OFR TM40XX
PRT	Portugal	55	52	52	Aggregate fleet segment	Available for all fleet segments or aggregated fleet segments; missing for 3 fleet segment - provided aggregated possibly due to confidentiality (A27 HOK VL1824 P3; A27 FPO VL0010 P2; A27 HOK VL1012 P2)	
ROU	Romania	6	4	6	Fleet segment	Available for all fleet segments	
SVN	Slovenia	13	4	4	Aggregate fleet segment	Available for all aggregate fleet segments	
SWE	Sweden	29	7	28	Fleet segment	Available for all fleet segments or aggregated fleet segments; missing for 1 fleet segment - provided by cluster possibly due to confidentiality (A27 PGO VL0010)	

3.2.4 Biological Indicator Visualisation Tool

The expert responsible for the calculation of the SHI values (J. Guitton), has developed an interactive tool which allows users to visualise the input data as well as the results of the biological indicator calculations. The tool is available at:

Link: http://sirs.agrocampus-ouest.fr/stecf_balance_2017/

The input data and balance indicator calculation results can be viewed thematically at fleet segment, country and supra-region level. For example, input data such as landings data can be visualised by weight or value; graphs showing the list of stocks used in calculations and the corresponding timeseries of F/F_{MSY} used for each stock can be displayed; indicator results can be viewed individually or as a combination of a number of indicators displayed on the same graph. The online tool includes updated values of (i) biological indicators specified in the 2014 Balance Indicator Guidelines, and (ii) the alternative indicators suggested in STECF reports 15-02 and 15-15.

EWG 17-08 considers that the tool provides a useful and informative synthesis of the available indicator values and makes the inputs and calculation process transparent. It could also aid Member States to identify and select those fleet segments that require targeted management measures to address the issue of balance/capacity.Member States. The figures below show some examples of the visual tools available online; an example of the potential utility of the evaluation tool is explained in section 3.8 of STECF report 15-15.

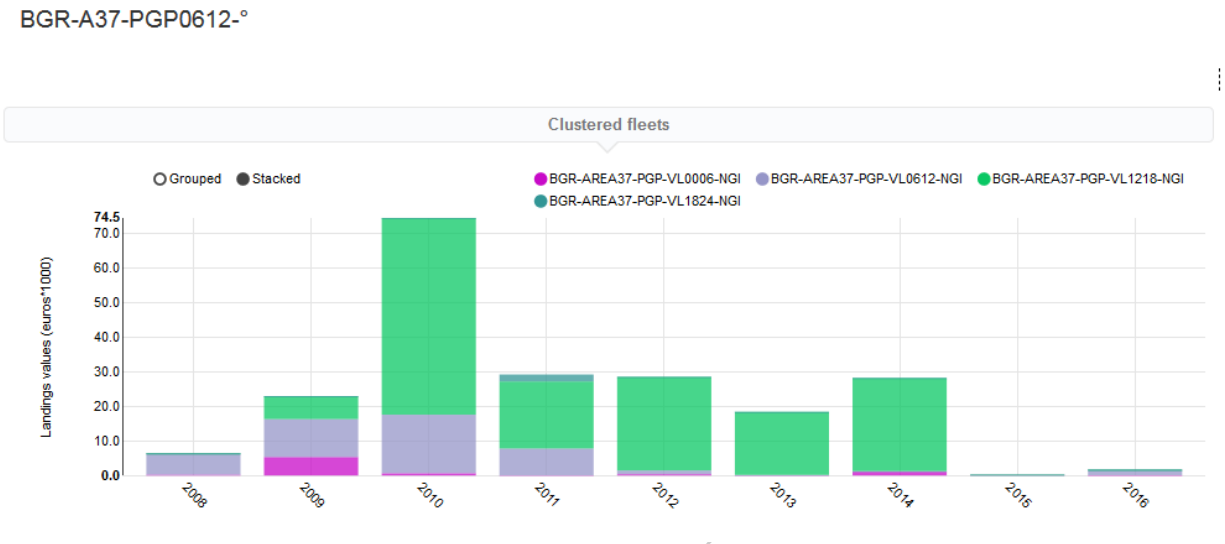


Figure 4.2.4.1. Comparison of fleet aggregation used in the calculation of economic indicators, where fleet segment clusters are used for confidentiality reasons, and biological indicators, where the lowest aggregation level possible is used. In the above example economic indicators would be available for the fleet segment BGR A37 PGP0612 A37 DFN1218 depending on the reference year biological indicators would be available for the corresponding segments BGR-AREA37-PGP-VL0612-NGI, , BGR-AREA37-PGP-VL0006-NGI, BGR-AREA37-PGP-VL1824-NGI, BGR-AREA37-PGP-VL1218-NGI. This tool allows for a visual check of clustering consistency by Member States between years.

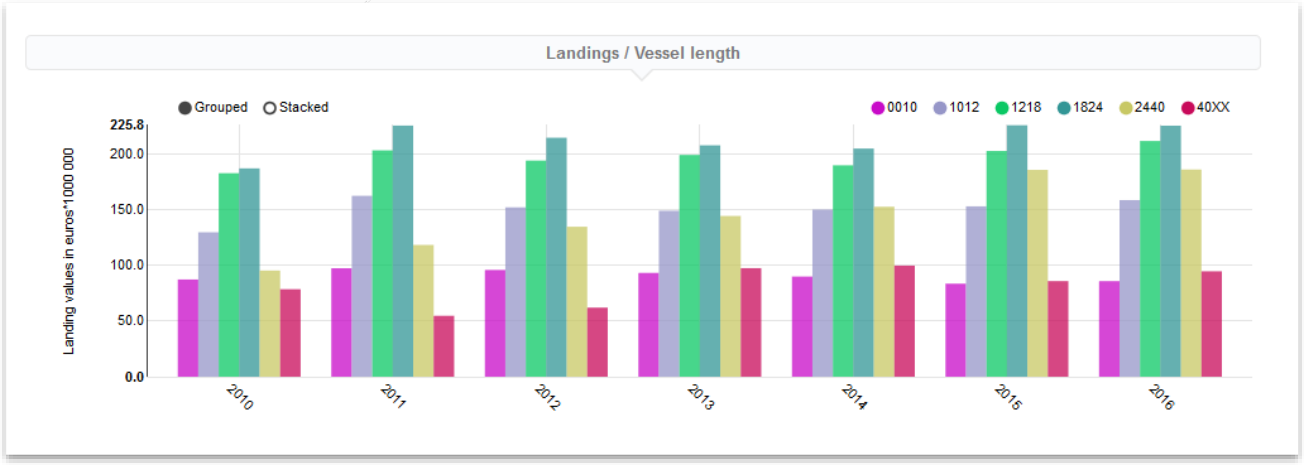


Figure 4.2.4.2. Total landings values in Euros (x 1 000 000) by fleet segment length (0-10 m; 10-12 m; 12-18 m; 18-24 m; 24 – 40 m; >40 m length overall) for the French

fleet in 2010 to 2016 working in AREA 27, as used in the calculation of balance indicators.

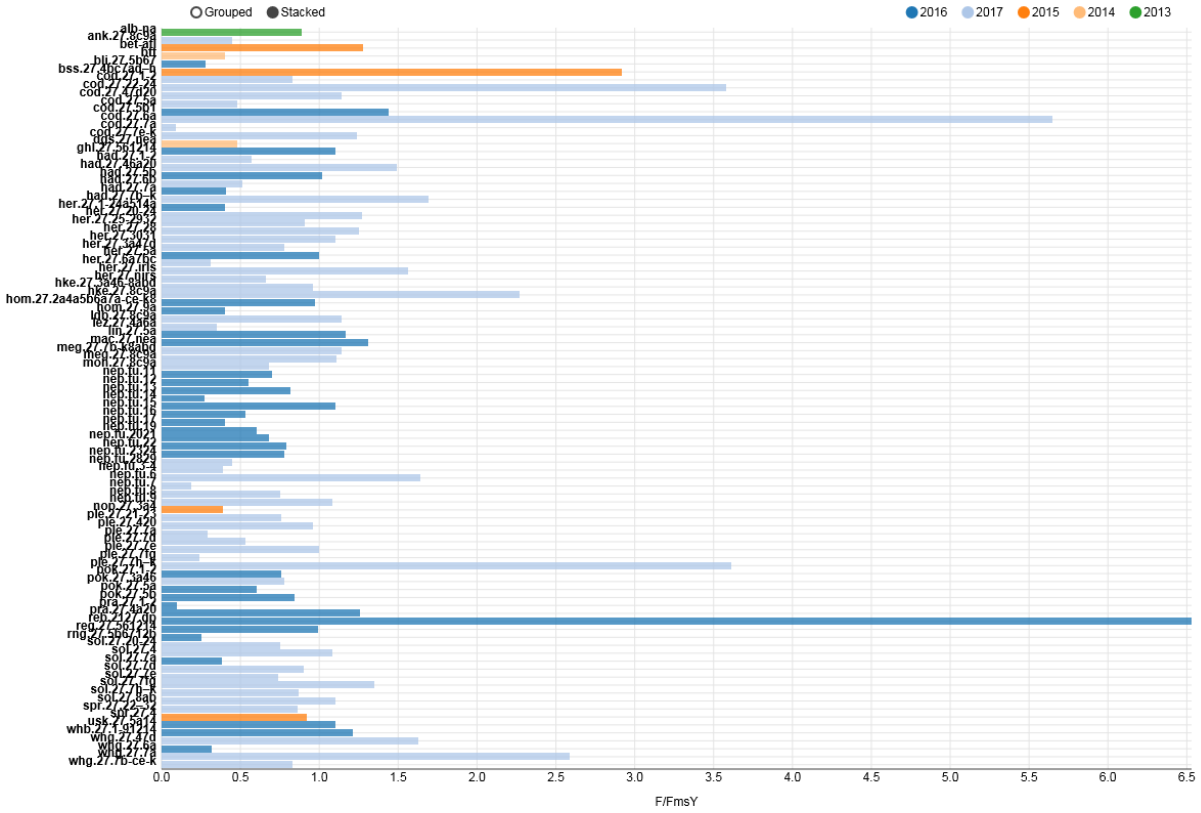


Figure 4.2.4.3. Most recent F/F_{MSY} values for stocks and corresponding landing values in Area 27 used in the calculation of the SHI indicator. Assessments made available in the reporting years 2013-2017 were used.

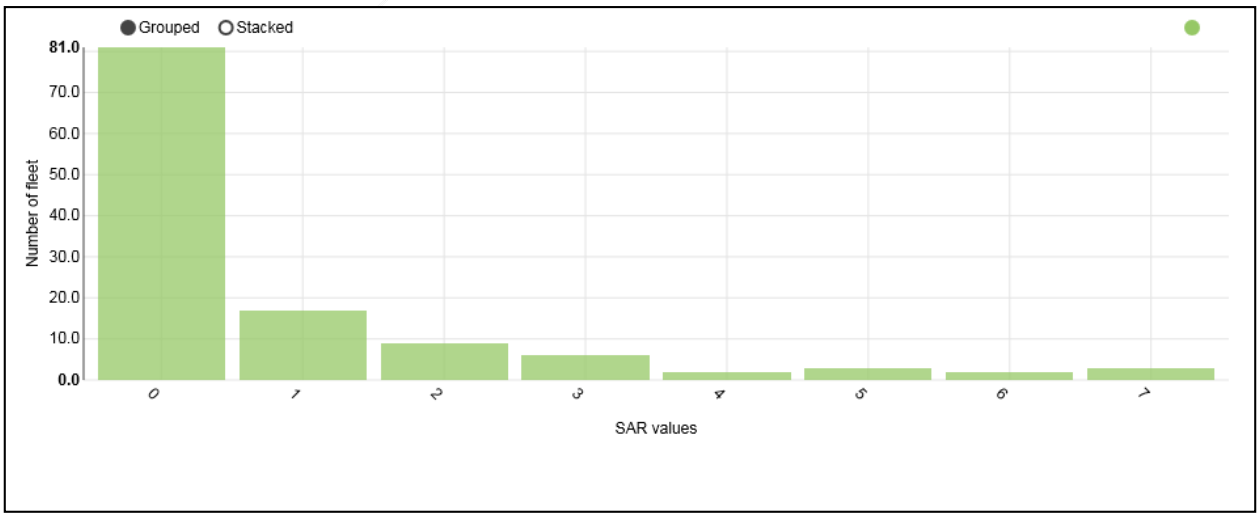


Figure 4.2.4.4. Stocks at Risk Indicator (SAR) calculation results – indicator values at Member State level. Example shows the number of French fleet in the reference year 2015, for which the SAR value is 0 (n=81), 1 (n = 17) etc.

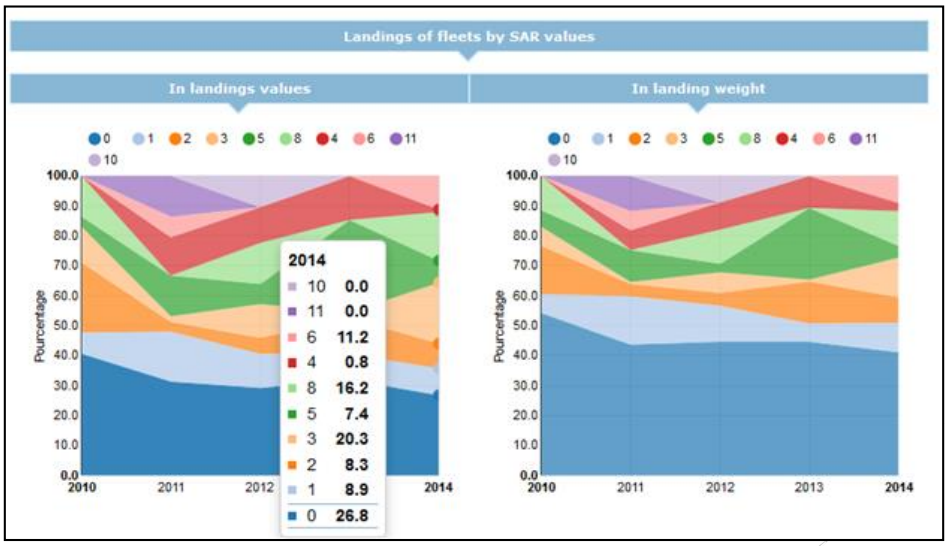


Figure 4.2.4.5. Stocks at Risk Indicator (SAR) calculation results at Member State level – proportion of landings made by fleet segments landing 0 to 11 stocks at risk. For example, in 2015 fleets which landed 0 stocks at risk accounted for 26.8% of landings values of the French fleet.

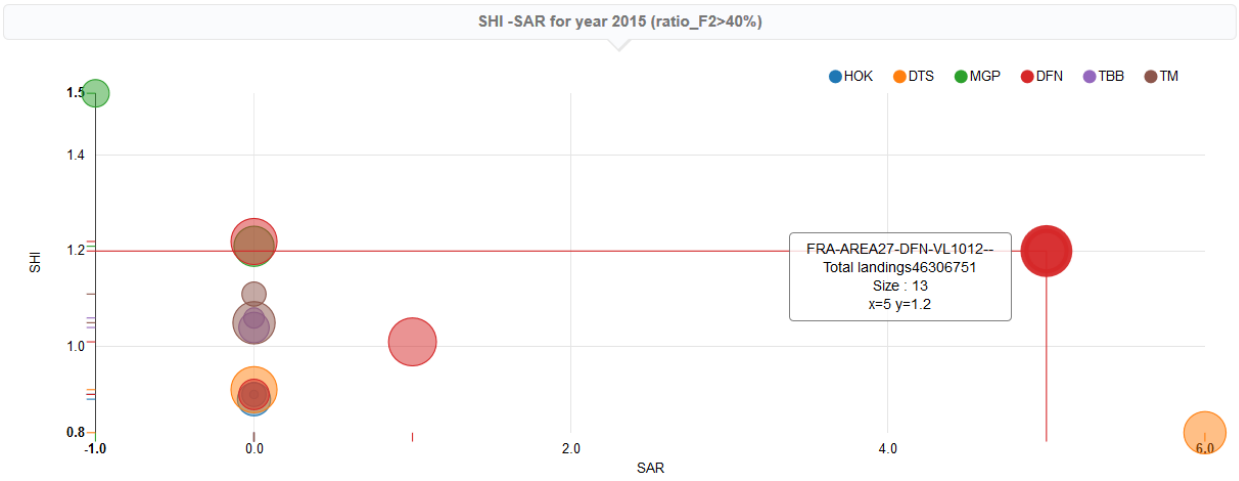


Figure 4.2.4.6. Results of Sustainable Harvest Indicator (SHI) and Stocks at Risk (SAR) indicator calculation results for the French fleet in AREA27, reference year 2015. Only SHI calculation results where more than 40% of the annual value of landings came from assessed stock (ratio_F2>40%) are shown. Users can choose to restrict the display to a particular fishing technique by clicking on the relevant symbol in the legend.

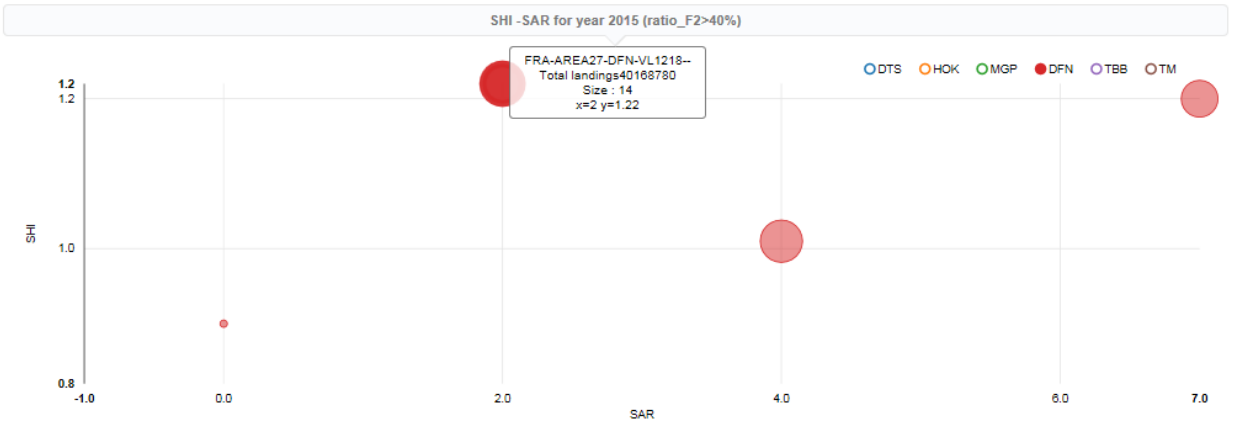


Figure 4.2.4.7. Results of Sustainable Harvest Indicator (SHI) and Stocks at Risk (SAR) indicator calculation results for the French DFN (Drift and/or fixed netters fleet) working in AREA27, reference year 2015. Only SHI calculation results where more than 40% of the annual value of landings came from assessed stock (ratio_F2>40%) are shown. Users can select a particular bubble to access information for the relevant fleet segment.

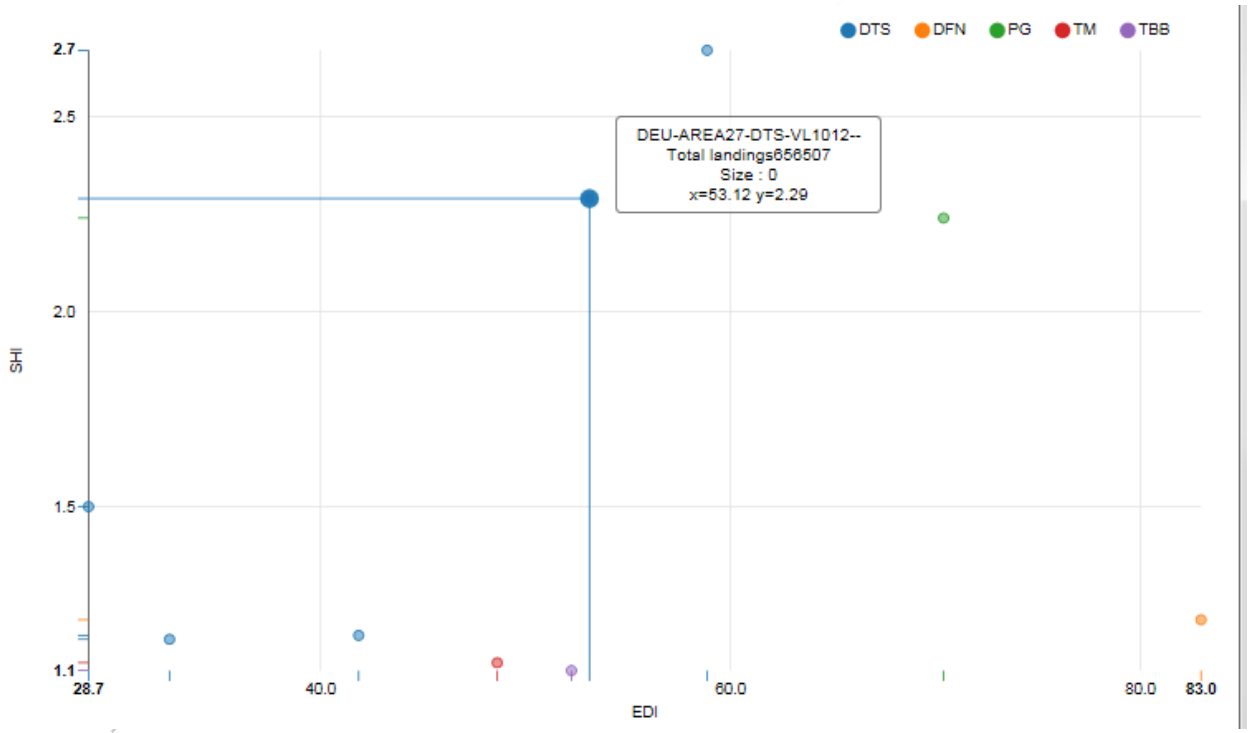


Figure 4.2.4.8. Results of Sustainable Harvest Indicator (SHI) and Economic Dependency Indicator (EDI - Part of the landings values based on overexploited stocks harvest) indicator calculation results for the German fleet operating in Area 27, reference year 2015. Only SHI calculation results where more than 40% of the annual value of landings came from assessed stock (ratio_F2>40%) are shown. Users can choose to restrict the display to a particular fishing technique by clicking on the relevant symbol in the legend.

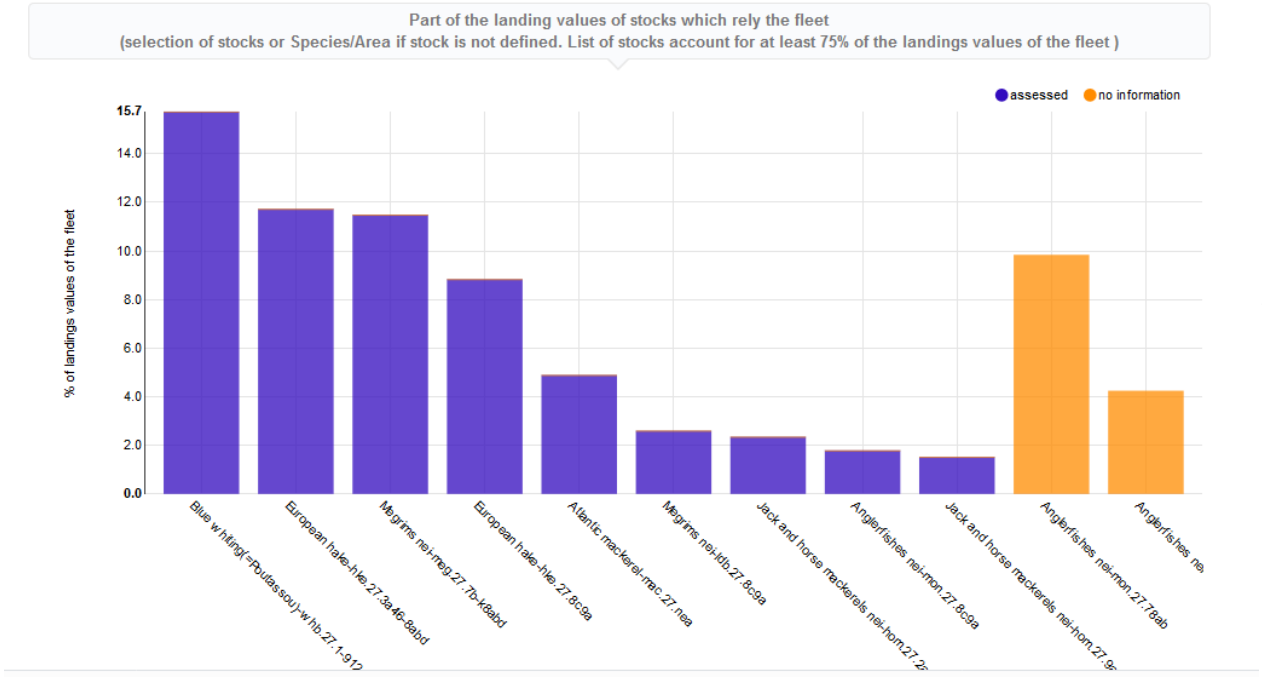


Figure 4.2.4.9. Results for the new indicator TOR4 for Spanish fleet ESP-AREA27-DTS-VL2440-. 11 species showed represents 75% of the landing values of the fleet and the blue ones are assessed and we have values of F/Fmsy. For orange species they are not included in the SHI calculation. If we want to improve the SHI coverage we first have to deal with stock assessment for these orange species. It's a way to highlight lack of knowledge.

3.3 Methods of Calculating Indicators and Trends

3.3.1 Sustainable Harvest Indicator (SHI)

According the 2014 Balance Indicator Guidelines (COM 2014, 545 final), the sustainable harvest indicator is a measure of how much a fleet segment relies on stocks that are overfished. Here, "overfished" is assessed with reference to F_{MSY} values over time (F / Fmsy > 1), and reliance is calculated in economic terms (landed value). Where F_{MSY} is defined as a range, exceeding the upper end of the range is interpreted as "overfishing". Values of the indicator above 1 indicate that a fleet segment is, on average, relying for its income on fishing opportunities which are structurally set above levels corresponding to exploitation at levels corresponding to MSY. According to the 2014 Balance Indicator Guidelines this could be an indication of imbalance if it has occurred for three consecutive years. Shorter time period should be considered in the case of small pelagic species.

A detailed description and discussion of the methodology can be found in the STECF report 15-02. According to the 2014 Balance Indicator Guidelines the SHI is calculated for each national fleet segment (or cluster of segments dependent on the information provided by Member States via the economic data call), using the following formula:

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

In which, Fi is the fishing mortality available for stock i from scientific assessments (e.g. ICES and STECF advice) and Vi is the value of landings from stock i. Data on Fi (mean F) and F_{MSY} for fish stocks found in Area 27 were obtained from the ICES online database, a database of stock assessments output summaries (http://ices.dk/marine-data/tools/Pages/stock-assessment-graphs.aspx/). For Area 37 output from assessments carried out by STECF working group was compiled by JRC (https://stecf.jrc.ec.europa.eu/dd/medbs/ram). In addition for 31 stocks information on F/Fmsy was extracted from GFCM (http://www.fao.org/gfcm/es/) reports. Information on tuna / tuna-like species was obtained from the ICCAT (http://www.iccat.es/en/) and IOTC website (http://www.iotc.org/). The full indicator time series (2009-2015) was updated based on the most recent assessments available (2016 is most cases) and F_{MSY} point estimates. Ranges for F_{MSY} have been estimated by ICES for a number of stocks but have not been officially adopted for management in most cases at the time the working group met. Therefore, the SHI is based on the F_{MSY} point estimates only.

Landings data are in many cases not available at species level and often more than one stock is present in a certain area. Sometimes the genus code is used in logbooks, and it covers more than one species for example RED for Sebastes spp (it covers for REB *Sebastes mentella* and REG *Sebastes marinus*). EWG 17-08 decided to use the last five years of landings data provided in the ICES advice sheets at the stock level to estimate the proportion of each stock in the DCF landing's data. The use of data from the ICES database is necessary since data reported under the DCF do not contain landings from shared stocks by non-EU fishing fleets.

For example, there are two cod stocks in Area 27.3.A: cod347d and cod.27.21. There are two stock assessments, for which the most recent (2010- 2016) landings weights are as follows:

Stock	Years	Total Landings (t)	Formula	Splitting Value
cod.27.47d20	2010-2016	245490	=1/(245490/(245490+996))	1.00405
cod.27.21	2010-2016	996	=1/(996/(245490+995))	247.475

For a hypothetical 100 Euros of declared cod, 100/1.003 will be assigned to cod347d and 100/297 to cod.27.21:

Stock	Formula	Landing Values
cod.27.47d20	100/1.00405	99.59
cod.27.21	100/247.475	0.404
Total		100

For the Mediterranean Sea, stocks may be assessed either as belonging a single or multiple GSAs and in such cases more than one assessment may be carried out. In such cases to associate a landings value to the F/F_{MSY} estimate for each stock assessment, we simple divide the total landings value reported for the combined GSAs by the number of assessments.

For example, for deep-water pink shrimp (DPS) in GSAs9, 10 and 11, two assessments are carried out; one for DPS in GSA 10 and a second for DPS in GSAs 9, 10 and 11 combined. Therefore, 50% of the total landings value from GSA 10 is associated with the value of F/F_{MSY} resulting for the GSA 10 assessment and 50% to that for GSAs 9,10 and 11. For GSA 9 and 11, landings values are associated with F/F_{MSY} from the merged GSAs(9,10 and 11) stock assessment. The stocks to which such a procedure has been applied are listed in Table 4.3.1.1.

Table 4.3.1.1 Stock assessed both by combined GSAs and single GSA at STECF EWGs.

DPS	dps-gsa10 dps-gsa09_10_11
	dps-gsa17_18 dps-gsa17_18_19
HKE	hke-gsa01 hke-gsa01_03 hke-gsa01_05_06_07
	hke-gsa09 hke-gsa09_10_11
	hke-gsa09_10_11 hke-gsa10"
	hke-gsa17_18 hke-gsa18
MTS	mts-gsa17 mts-gsa17_18
	mts-gsa17_18 4mts-gsa18
MUT	mut-gsa17 mut-gsa17_18
PIL	pil-gsa01 pil-gsa01-03

A detailed overview of the values for splitting the stocks are provided in Annex IV of the present report.

EWG 17-08 considers that this methodology should be refined (e.g. annual splitting values could be calculated / splitting values could be calculated at MS level) after peer review by a larger number of experts with expertise in the various geographical regions for which the biological indicators are calculated.

The most important issues related to the calculation of indicator values discussed and addressed during the EWG 17-08 Prep and previous Prep. Meeting are outlined below:

- Stock Assessment Selection - The 2014 Balance Indicator Guidelines state the calculation of the SHI indicator should take into account '*the most recent value of fishing mortality available from scientific assessments'*. The EWG 17-08 Prep. Meeting discussed the approach which should be taken in the absence of recent, updated stock assessments, and agreed that the SHI should take into account all stocks for which the most recent assessment was undertaken in 2013 or more recently.

- F_{MSY} Ranges - STECF 15-15 pointed out that proposals for stock management plans in the ICES area are currently taking into account F_{MSY} ranges. In such scenario SHI calculations would need to be revised to reflect the use of F_{MSY} ranges in management plans, a scenario for which the 2014 Balance Indicator Guidelines state: '*Where Fmsy is defined as a range, exceeding the upper end of the range is interpreted as "overfishing*"'. The EWG 17-08 Prep. Meeting thus double checked whether F_{MSY} ranges instead of point estimates had been adopted as the basis for management. Only in the case of Western Baltic (subdivisions 22–24) cod (*Gadus morhua*) and herring (*Clupea harengus*) in subdivisions 25-29 and 32, and herring (*Clupea harengus)* in subdivision 28.1 the ICES management plan advices for 2018 is based on F_{MSY} ranges. As this report deals with data up to 2015, such ranges had not yet been adopted for management. The ICES MSY approach does not include the Fmsy ranges. The ICES stock assessment database does not include the lower and upper ranges yet. Therefore, to keep the consistency between regions and MS, SHI calculations continue to be based on point estimates of F_{MSY} for this year. However, once more management plans using Fmsy ranges are agreed, they should be considered for future calculations. One example comparing SHI based on F_{MSY} ranges or point estimate is included in chapter 4.4.

- Norway Lobster FUs - Information from the ICES stock assessment graph database has been used to split the *Nephrops* landings in a given area into Functional Unit (FU) based estimates (if there was more than one FU in a given area). An average over the last five years' landings by FU has been used to calculate the splitting factors. Only *Nephrops* FUs with harvest rates and F_{MSY} values available (category 1 *Nephrops* stocks) are included in the calculation of the SHI indicator. Possible shortcomings of this method are described in section 4.4.2.

- ICES currently estimates F_{MSY} proxies for many data limited stocks (assessment category 3 and 4). For many of these stocks the state in relation to F_{MSY} proxy is given in the advice, however, the exact values for F_t/F_{MSY} (F_t = fishing mortality by year) are not presented and they are also missing in the assessment database. EWG 17-08 was not able to include these stocks in the SHI calculations. For future years, a recommendation to ICES to provide this information would be highly beneficial.

- Eastern Baltic Cod - The age-based Eastern Baltic (subdivisions 24-32) cod stock assessment could no longer be accepted by ICES WGBFAS in 2014 mainly because of age reading problems as well as changes in growth rates leading to unknown

changes in catchability. From 2014 onwards the stock has been assessed as a category 3 stock and an F_{MSY} value has no longer been provided by ICES. Therefore, the last F and F_{MSY} value available is the one from the 2014 assessment. During the EWG 16-09 Prep. Meeting it was discussed whether it could be appropriate to assume the 2013 F value to be constant for the following years and still use the old F_{MSY} value. This approach is applied to other stocks without newer update assessments. However, given that the assessment has been rejected by ICES WGBFAS, the EWG 17-08 Prep. Meeting decided that this is a different situation. It is unclear whether the 2013 F value is valid given the problems in the assessment that were present also before 2014. The rejection of the assessment also questions the validity of the old F_{MSY} estimate. As consequence, the EWG 17-08 Prep. Meeting decided to withdraw Eastern Baltic cod completely from the SHI index calculations as there is currently no basis to determine the status of the stock.

- Highly Migratory Stocks (ICCAT) - Stock status information for highly migratory species under the jurisdiction of the ICCAT was reviewed to determine which stocks could be incorporated in the SHI indicator since a stock assessment database with stock status data are not available from ICCAT. Stocks were selected according to the following criteria:
    - The most recent assessment was undertaken in 2013 or more recently;
    - A value for F/F_{MSY} was given in, or a value for F/F_{MSY} could be derived using the information given in the relevant ICCAT report.

  Using the above criteria, the following stocks were included in the SHI:
    - Eastern Atlantic and Mediterranean Bluefin tuna (BFT);
    - North Atlantic Swordfish (SWO ATLN);
    - Atlantic Bigeye tuna (BET);
    - North Atlantic Albacore (ALB ATLN);
    - South Atlantic Albacore (ALB ATLS).

  For BET and for ALB ATLN, time series of F/F_{MSY} were derived from Figures 6 and 17 in reports available at:
  https://www.iccat.int/Documents/SCRS/ExecSum/BET_ENG.pdf
  https://www.iccat.int/Documents/Meetings/Docs/2016_ALB_REPORT_ENG.pdf

  In the absence of appropriate information in the ICCAT reports, no time series for F/F_{MSY} were available or could be derived for BFT, SWO ATLN or ALB ATLS. In such cases, the point estimates for F/F_{MSY} were assumed to remain constant over the time series used to calculate the SHI. Although the most recent assessment for Mediterranean Swordfish was in 2013, this stock was not included for calculating the SHI because of the problems with the 2014 assessment giving rise to high uncertainty associated with the stock status. A revised assessment was undertaken in 2016, but the report was not available by the 30 June cut-off date adopted by the EWG 17-08 Prep. Meeting.

- Mediterranean and Black Sea Biological Indicator Evaluation
  Assessment made during STECF working group was compiled by JRC and was provide for the SHI calculation. This was a useful source of information that would

be a recurrent data collection. However, GFCM stock assessment was not included in this stock assessment database and during the preliminary working group 31 stocks assessment parameters were collected from GFCM website and included in the SHI calculation.

- EWG 17-08 Prep. Meeting participants noted that the list of F/F_{MSY} ratios in the JRC database includes only the outcomes of the assessment carried out in the framework of STECF meetings. In order to further increase the accuracy of the SHI calculation for the Mediterranean, information on F and F_{MSY} timeseries was therefore extracted from reports of the GFCM Working Group on Stock Assessment of Demersal Species (WGSAD), the Working Group on Stock Assessment of Pelagic Species (WGSAP), as well as stock assessment forms available online (http://www.fao.org/gfcm/data/safs/en/). EWG 17-08 Prep. Meeting notes that this was a time consuming process since in many cases data has to manually be extracted from graphs provided in stock assessment forms, and considers that a single database with a complete list of updated assessments (as is available for the ICES region) should be required for the Mediterranean and Black Sea and for high migratory species especially looking for Tuna species assessments. For Tuna, F/F_{MSY} has been collected through ICCAT and IOTC but sometimes reports only provide short time series.
- In cases where stock assessments were available from more than one source, the more updated stock assessment was taken into account for SHI calculations. Where STECF and GFCM assessment were available and values of F and/or F_{MSY} differed, both assessments were retained and the SHI calculations were based on an average of the two assessment results.

Indicator Trends

SHI indicator trends were calculated according to the filters detailed below for the years 2011-2015.

Table 4.3.1.2 Methodology used to automatically generate comments on indicator trends.

Filter 1	Filter 2	Result
At least the last 2 consecutive years with data	Slope* >0.5	Increasing
	Slope* <-0.5	Decreasing
	-0.5=<Slope*=<0.5	No significant trend**
	Slope = 0	Flat / null
No data for 2014 and/or 2015		No conclusion (Null value)

* The slope is calculated with the intercept of the trend line / the first value of the trend (a/i0)
** A threshold of 5% is used to indicate whether the value is significant or not.

Instances where the SHI indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments are highlighted in the indicator table. EWG 17-08 considers that for such fleet segments SHI indicator values

cannot be used meaningfully to assess the balance or imbalance. No trend analysis was performed for such fleet segments.

3.3.2 Stocks at Risk Indicator (SAR)

According the 2014 Balance Indicator Guidelines (COM 2014, 545 final), the stocks at risk indicator is a measure of how many stocks are being affected by the activities of the fleet segment that are biologically vulnerable, i.e., stocks which are at low levels and are at risk of not being able to replenish themselves and which are either important in the catches of the fleet segment or where the fleet segment is important in the overall effects of fishing on the stock. If a fleet segment takes more than 10% of its catches taken from a stock which is at risk, or the fleet segment takes 10% or more of the total catches from a stock at risk, the 2014 Balance Indicator Guidelines suggest that this could be treated as an indication of imbalance.

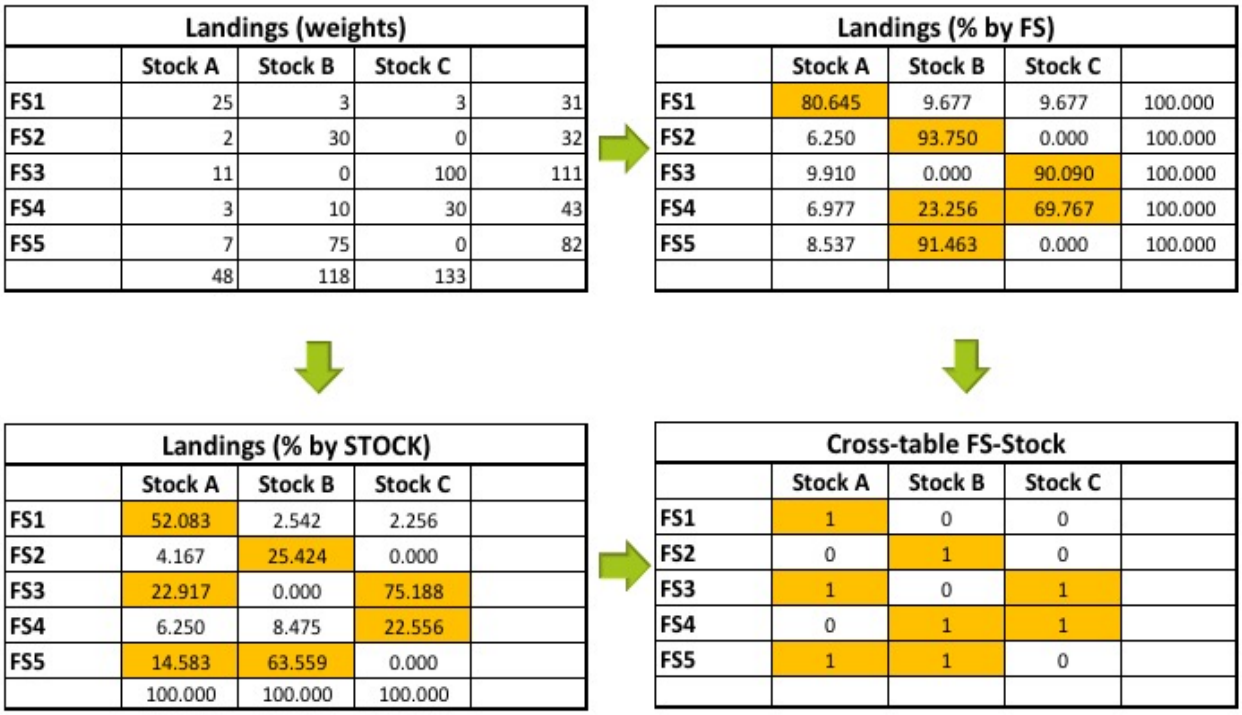
A detailed description and discussion of the methodology can be found in the reports of STECF 15-02 / 15-15. According to the 2014 Balance Indicator Guidelines the SAR indicator aims to count the number of stocks that are exploited by a fleet segment and which are currently assessed as being at high biological risk. According the definition of the SAR indicator in the 2014 Balance Indicator Guidelines, a stock at risk (SAR) means a stock which is either:

a) assessed as being below the B_{lim}; or
b) subject to an advice to close the fishery, to prohibit directed fisheries, to reduce the fishery to the lowest possible level, or similar advice from an international advisory body, even where such advice is given on a data-limited basis; or
c) subject to a fishing opportunities regulation which stipulates that the fish should be returned to the sea unharmed or that landings are prohibited; or
d) a stock which is on the IUCN 'red list' or is listed by CITES.

AND for which either:

1- the stocks make up to 10% or more of the catches by the fleet segment; **or**
2- the fleet segment takes 10% or more of the total catches from that stock.

The meaning of these last two conditions are represented in Figure 4.3.2.1. Here, three stocks are exploited by five fleet segments, and landings data (in weights) are available for each stocks/fleet segment. The marginal sum of landings for each fleet segment is computed (by row) and used to scale each landing value to its relative contribution (in percentage) to the total landings for each fleet segment. In the meantime, the marginal sum of landings for each stock (by column) is computed and used to scale each landing value to its relative contribution (in percentage) to the total landings for each stocks. According to the SAR definition, all the cases in which either the relative contribution by fleet segment or by stocks is equal to or larger than 10% are selected and considered for the SAR. Then, the value of the SAR for each fleet segment corresponds to the number (if any) of the stocks over the threshold (highlighted in orange) and listed as "at risk". In the example of Fig. 4.3.2.1, if all the stocks (A, B, and C) are defined "at risk", the Fleet segments 1 and 2 will have a SAR=1, while the Fleet segments 2-5 will have a SAR=2.



Landings (weights)				
	Stock A	Stock B	Stock C	
FS1	25	3	3	31
FS2	2	30	0	32
FS3	11	0	100	111
FS4	3	10	30	43
FS5	7	75	0	82
	48	118	133	

Landings (% by FS)				
	Stock A	Stock B	Stock C	
FS1	80.645	9.677	9.677	100.000
FS2	6.250	93.750	0.000	100.000
FS3	9.910	0.000	90.090	100.000
FS4	6.977	23.256	69.767	100.000
FS5	8.537	91.463	0.000	100.000

Landings (% by STOCK)				
	Stock A	Stock B	Stock C	
FS1	52.083	2.542	2.256	
FS2	4.167	25.424	0.000	
FS3	22.917	0.000	75.188	
FS4	6.250	8.475	22.556	
FS5	14.583	63.559	0.000	
	100.000	100.000	100.000	

Cross-table FS-Stock				
	Stock A	Stock B	Stock C	
FS1	1	0	0	
FS2	0	1	0	
FS3	1	0	1	
FS4	0	1	1	
FS5	1	1	0	

Figure 4.3.2.1. Example of pre-processing of landings data for the computation of the SAR indicator

The same methodology described in the STECF 15-02 / 15-15 reports was applied by the expert selecting stocks for the calculation of the SAR. The calculation of the indicator was then carried out using a routine written in R. The script is designed to compute the SAR indicator value, for the temporal range defined by the input data, for each fleet segment, by crossing-checking landings data with a list of stocks-at-risk.

The same methodology used for attributing landings data available at species level to stocks was used for the calculation of the SAR indicator (see section 4.3.1). The full list of stocks at risk identified for the assessed fleet segments in the reference year 2015 is presented in Annex IV.

SAR R Script: Inputs

Four sources of data are used as input for the calculation:

1. The full database of the DCF Landings by year, species, areas and fleet segment provided by the JRC;
2. The list of the stocks identified as "at-risk" for one (or more) of the conditions a) to b) in the previous definition. These stocks at risk are listed by year, stock code, FAO 3 alpha code and area.
3. The splitting table described for the SHI (see section 4.3.1) and used to estimate the proportion of each stock in the DCF landing's data.
4. The ICES database of stock distribution, which represents a reference for some steps of the computation and for the check of coherence of the other input data.

The R script firstly uses as input the DCF Landings database provided by the JRC (in csv format). The first step of the analysis is the re-shaping of landings data: records by

species are transformed in records by stocks. This transformation is based on the splitting table mentioned above.

The list of the stocks as risk was organized as a 2-way matrix, in which each row corresponds to a stock identified by its code, the 3 alpha species code and the area of presence, while each column corresponds to a year of the analysis (see Table 4.3.2.1).

In this matrix, the code "ALL" identify stocks at risk for with respect to all the fishing techniques, whereas specific codes separated by commas are listed in other cases. Empty cells of the matrix correspond to stocks NOT at risk for a specific year.

Table 4.3.2.1 Some sample rows of the SAR matrix input

fishstock	species_code	sub_division_fao	2009	2010	2011	2012	2013	2014	2015
sol.27.7a	**SOL**	27.7.a	ALL	ALL	ALL	ALL	ALL	ALL	ALL
sol.27.8ab	**SOL**	27.8.a	ALL					ALL	ALL
sol.27.8ab	**SOL**	27.8.b	ALL					ALL	ALL
gag.med	**GAG**	sa.1				LL, GNS, GEN	LL, GNS, GEN	LL, GNS, GEN	LL, GNS, GEN

SAR R Script: Version and Dependencies

The R script uses only two external packages:

- The openxlsx package available at CRAN (https://cran.r-project.org/web/packages/openxlsx/index.html). The package openxlsx requires the packages: methods, Rcpp (≥ 0.11.1), grDevices, stats, utils.
- The stringr package available at CRAN (https://cran.r-project.org/web/packages/stringr/index.html). The package stringr requires the packages: stringi (≥ 0.4.1), magrittr.

The R script can be used from basic R users and runs on different versions of R (not necessarily the latest release).

SAR R Script: Workflow

The workflow is summarized in Figure 4.3.2.1.

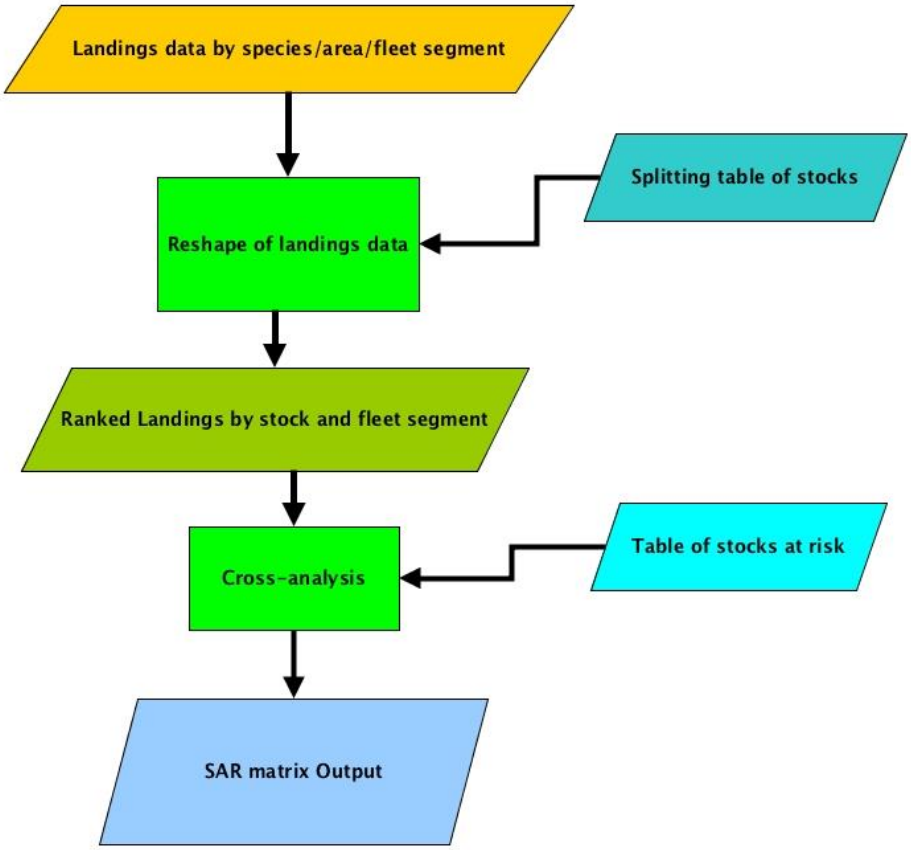


Figure 4.3.2.1. Workflow of the R script designed to calculate the SAR for EU fleet segments

SAR R Script: Outputs

The R script returns three objects:

1. A data frame, exported as a common Excel File (.xlsx), in long format, which reports the SAR value for each fleet segment and for each year. This is the main output of the script and contains the following fields:
    - Member.State: the three alpha code identifying the MS
    - Supra.Region: the area of activity of the fleet segment
    - Fishing.technique: the gear used
    - Vessel.length.group: the class of LOA
    - geo_indicator: Area
    - Year: the reference year
    - SAR: the value of the SAR indicator
    - Interpretation: the meaning of the SAR value
    - Fleet_Segment_name: an internal code generated by the JRC for data processing purposes
    - Cluster_name: the highest level of aggregation
    - Stock_at_Risk: the name of the stocks determining the SAR value
    - Category of the threshold: a : >10% fleet segment catch, b : > 10% stock catch or both

An example of this output is provided in Table 4.3.2.2.

Table 4.3.2.1 Some sample rows of the SAR matrix output.

Member.State	Supra.Region	Fishing.technique	Vessel.length.group	geo_indicator	year	SAR	Interpretation	Fleet_Segment_name	Cluster_name	Stock_at_Risk	Criteria
SWE	AREA27	DFN	VL0010	NGI	2009	1	Out of balance	SWE A27 DFN0010 "	DFNVL0010	cod.27.22-24	a
SWE	AREA27	DFN	VL0010	NGI	2010	1	Out of balance	SWE A27 DFN0010 "	DFNVL0010	cod.27.22-24	a
SVN	AREA37	DFN	VL0006	NGI	2014	-1	No stocks at risk found	SVN A37 DFN0006 "			
SVN	AREA37	DFN	VL0006	NGI	2015	-1	No stocks at risk found	SVN A37 DFN0006 "			
ESP	AREA27	HOK	VL2440		2009	2	Out of balance	ESP A27 HOK2440			a,b,b
ESP	AREA27	HOK	VL2440		2010	1	Out of balance	ESP A27 HOK2440			a
ESP	AREA27	HOK	VL2440		2011	1	Out of balance	ESP A27 HOK2440			a,b
ESP	AREA27	HOK	VL2440		2012	3	Out of balance	ESP A27 HOK2440			a,b,b,b
ESP	AREA27	HOK	VL2440		2013	1	Out of balance	ESP A27 HOK2440			a,b
ESP	AREA27	HOK	VL2440		2014	0	In balance	ESP A27 HOK2440			
ESP	AREA27	HOK	VL2440		2015	0	In balance	ESP A27 HOK2440			

The most important issues related to the calculation of indicator values discussed and (where possible) addressed during the EWG 17-08 Prep. Meeting and previous Prep. Meeting are outlined below:

- *Committee for Central for Eastern Atlantic (CECAF)* - Stock status information for pelagic species under the jurisdiction of the CECAF was reviewed to determine which stocks could be incorporated in the SAR indicator. Selection of stocks for inclusion in the SAR was according to the criteria specified in the 2014 Indicator Guidelines, but restricted to those stocks for which the most recent assessment was in 2015 or more recent years. Cunene horse mackerel (*Trachurus trecae*) was included for calculating the SAR.

- Horse makcrel Stock status hom.27.2a4a5b6a7a-ce-k8. The preparatory Working Group reviewed the ICES adivice was according to the criteria specified in the 2014 Indicator Guidelinesfor SAR selection. No Blim is provided for this stock but the Pre-EWG agreed to include the stock as SAR for 2015 on the ICES information absis "In recent years, SSB has been declining and is currently the lowest observed in the entire time-series, below MSY Btrigger. Fishing mortality has increased since 2007 and is currently just below FMSY.

- Where new species were added to the SAR list, the relevant geographical ranges were investigated and corresponding FAO fishing areas added to the Stock Description column in the 2016 SAR stock selection sheet.

- The main issues faced by the group during the EWG 17-08 Prep. Meeting were that in some cases the stock assessments had not yet been released and this would need to be updated with the new B_{lim} if available before the deadline the group's agreed deadline (15/07/2017). Moreover, stocks with B_{lim} were easily selected based on criterion (a) but in the case of criteria (b) and (d) in some cases the advice might be subject to interpretation. The group thus reviewed the available information and agreed the outcomes during preparatory meeting.
- Since 2016, ICES is on a review process of stock coding for auto-generation of advice sheets. The groups noticed that the cessation of the STECF Consolidated Review of Scientific Advice reports in 2014 caused difficulties for the compilation of stock advice, especially in OFR areas.

- The experts agreed to select only the "critically endangered" fish species listed on the IUCN Red list as stocks at risk for the SAR calculation, in order to be consistent with the previous years.
- New stocks assessed at a smaller scale than the spatial aggregation of the DCF landings data available to the EWG were considered during the preparatory EWG 17-08 in order to define a splitting rule for such cases (e.g.: cod stock in Artic cod.27.1-2-coast, Cod (Gadus morhua) in subareas 1 and 2 (Norwegian coastal waters cod) located in 27.21.D coastal waters only).
- SAR definition criteria "c" includes some EC Regulations for fishing opportunity. In the present EWG the coding system was use to distinguished gear prohibition for some stocks. However the temporal measures listed in such Regulations cannot be included in the SAR selection.
- The groups stressed that the information on SAR criteria "b" and "c" are still heterogeneous from the various relevant reports and selection of stocks still dependent on interpretation, with the exception of criteria "a" and "d".
- The group highlight the impossibility to perform properly the calculation for some OFR stocks. Only the first threshold calculation can be performed (the stocks make up to 10% or more of the catches by the fleet segment) but the second one is partial (the fleet segment takes 10% or more of the total catches from that stock.) considering that the EWG does not have access to the total catch of OFR stocks.
- The group highlights the impossibility to perform properly the calculation for some OFR stocks. Only the first threshold category can be performed (the stocks make up to 10% or more of the catches by the fleet segment) but the second one is partial (the fleet segment takes 10% or more of the total catches from that stock) considering that the groups don't have access to the total catch of OFR stocks.

Indicator Trends

EWG 17-08 agreed with the conclusions reached in the STECF 15-02 / 15-15 reports that calculation of trend for SAR indicator is not relevant. Considering that SAR selection is based on quantitative or qualitative data and is calculation produce a binary value after threshold selection, it would be incorrect to produce a trend.
Falling that, the group decided to produce an overview table of the SAR indicator per year and areas (see table here: https://stecf.jrc.ec.europa.eu/reports/balance) .

3.3.3 Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

According the 2014 Balance Indicator Guidelines (COM 2014, 545 final), the Return on Investment (ROI) or Return on Fixed Tangible Assets (RoFTA) indicator compares the long-term profitability of the fishing fleet segment to other available investments. If this value is smaller than the low-risk long term interest rates available elsewhere, then this suggests that the fleet segment may be overcapitalised. If the return on investment or net profit is less than zero and less than the best available long-term risk-free interest rate, this is an indication of long-term economic inefficiency that could indicate the existence of an imbalance.

Note: Indicators are not calculated if one or more of the essential cost and income items were not provided e.g. Net profit is not calculated if depreciated replacement value was not provided

ROI (also referred to as capital productivity) is the return of the investment divided by the cost of the investment. It measures profits in relation to the capital invested, i.e. indicates how profitable a sector is relative to its total assets. The higher the return, the more efficient the sector is in utilising its asset base.

When data on intangible assets (e.g. fishing rights, natural resource) are not available, the Return on Fixed Tangible Assets (ROFTA) is used as an approximation of ROI.

ROI is calculated as:

Net profit / (fleet depreciated replacement value + estimated value of fishing rights)

where,

Net profit = (Income from landings + other income + income from fishing rights) -

(crew wage + unpaid labour + energy + repair + other variable costs + non variable

costs + fishing rights costs + annual depreciation)

ROI is compared against a Target Reference point (TRP). For this exercise, the 5-year average of the risk free long-term interest rate for each MS was used.

RoFTA is calculated as

Net profit / (fleet depreciated replacement value);

where,

Net profit = (Income from landings + other income) - (crew wage + unpaid labour +

energy + repair + other variable costs + non variable costs + annual depreciation)

EWG 17-08 applied the criteria of the 2014 Balance Indicator Guidelines to comment on whether fleet segments where 'in balance or ,out of balance'. When the indicator value was less than the interest rate, but greater than zero the comment, not sufficiently profitable' was used.

Since ROI is only available for countries that provide data on fishing rights (income, costs and estimated valu of fishing rights), and RoFTA is available for all MS except Greece, analysis was mainly based on RoFTA values.

Indicator Trends

Trends were calculated according to the filters detailed below for the years 2011 - 2015.

Table 4.3.3.1 Methodology used to automatically generate comments on indicator trends.

Filter 1	Filter 2	Result
At least the last 2 consecutive years with data	Slope* >0.05	Increasing
	Slope* <-0.05	Decreasing
	-0.05=<Slope*=<0.05	No significant trend**
	Slope = 0	Flat / null
No data for 2014 and/or 2015		No conclusion (Null value)

* The slope is calculated with the intercept of the trend line / the first value of the trend (a/i0)
** A threshold of 5% is used to indicate whether the value is significant or not.

3.3.4 Ratio Current Revenue and Break-Even Revenue (CR/BER)

According the 2014 Balance Indicator Guidelines (COM 2014, 545 final), the ratio between current revenue and break-even revenue measures the economic capability of the fleet segment to keep fishing on a day-by-day basis: does income cover the pay for the crew and the fuel and running costs for the vessel? If not, there may be an imbalance. If the ratio between current revenue and break-even revenue is less than one, this is an indication of short-term economic inefficiency that could indicate the existence of an imbalance.

Current revenue to break-even revenue ratio (CR/BER) is calculated as:

Current revenue (CR) / Break Even Revenue (BER)

In which:
CR = income from landings + other income
BER = fixed costs / (1-[variable costs / current revenue])

In which:
Fixed costs = non variable costs + annual depreciation
Variable costs = crew wage + unpaid labour + energy costs + repair costs + other variable costs

As for the ROI or RoFTA indicator, fleet segments frequently need to be grouped together in clusters in order to deliver economic data that does not breach confidentiality requirements. Fleet segments should only be clustered when the number of vessels in the fleet segment is too low to ensure confidentiality of sensitive economic data. As economic data are often only provided by the main fleet segment contained in the cluster, the other minor fleet segments in the cluster may not contain any data.

<u>Indicator Trends</u>

Trends were calculated according to the filters detailed below for the years 2011 - 2015.

Table 4.3.4.1 Methodology used to automatically generate comments on indicator trends.

Filter 1	Filter 2	Result
At least the last 2 consecutive years with data	Slope* >0.05	Increasing
	Slope* <-0.05	Decreasing
	-0.05=<Slope*=<0.05	No significant trend**
	Slope = 0	Flat / null
No data for 2014 and/or 2015		No conclusion (Null value)

* The slope is calculated with the intercept of the trend line / the first value of the trend (a/i0)
** A threshold of 5% is used to indicate whether the value is significant or not.

3.3.5 The Inactive Fleet Indicators

According the 2014 Balance Indicator Guidelines (COM 2014, 545 final), the Vessel Use Indicators describe how intensively the ships in a fleet segment are being utilized. One of these Vessel Use Indicators is the Inactive Fleet Indicator, which describes the proportion of vessels that are not actually active at all (i.e. that did not fish at any time in the year).

The inactive vessels are split according to length classes. For each subgroup, the number of vessels, total GT and kW were provided per year. If the proportion of inactive vessels is more than 20% (in number or in GT or in kW) within a MS, this could indicate some technical inefficiency.

Indicator Trends

Trends were calculated according to the filters detailed below for the years 2011 - 2015.

Table 4.3.5.1 Methodology used to automatically generate comments on indicator trends.

Filter 1	Filter 2	Result
At least the last 2 consecutive years with data	Slope* >0.05	Increasing
	Slope* <-0.05	Decreasing
	-0.05=<Slope*=<0.05	No significant trend**
	Slope = 0	Flat / null
No data for 2014 and/or 2015		No conclusion (Null value)

* The slope is calculated with the intercept of the trend line / the first value of the trend (a/i0)
** A threshold of 5% is used to indicate whether the value is significant or not.

3.3.6 The Vessel Use Indicator

According the 2014 Balance Indicator Guidelines (COM 2014, 545 final), the 'Vessel Use Indicators' describe how intensively the ships in a fleet segment are being utilised. One of these Vessel Use Indicators is the Vessel Utlilisatio Indicator, also known as the Vessel Utilisation Ratio (VUR). This indicator concerns the average activity levels of vessels that did fish least once in the year, taking account of the seasonality of the fishery and other restrictions. Under normal conditions, it can be expected that 10% or less of the vessels

in a fleet segment should be inactive, which could be due to major repairs, refits, conversions or pending sales and transfers. If more than 20% of the fleet segment is recurrently inactive or if the average activity level of vessels in a fleet segment is recurrrently less than 70% of the potential, workable activity of comparable vessels, this could indicate technical inefficiency, that may reveal the existence of an imbalance, unless it can be explained by other reasons, such as unexpected climatic or man-made events or emergency measures as foreseen in the CFP.

Two sets of values for this indicator were included in the balance indicator tables prepared by JRC: VUR per fleet segment based on max DAS (Days At Sea) provided by MS, and VUR per fleet segment based on a common max DAS of 220. In cases were MS does not provided the max DAS, 220 DAS is applied as an alternative.

Indicator Trends

Trends were calculated according to the filters detailed below for the years 2011 - 2015.

Table 4.3.6.1 Methodology used to automatically generate comments on indicator trends.

Filter 1	Filter 2	Result
At least the last 2 consecutive years with data	Slope* >0.05	Increasing
	Slope* <-0.05	Decreasing
	-0.05=<Slope*=<0.05	No significant trend**
	Slope = 0	Flat / null
No data for 2014 and/or 2015		No conclusion (Null value)

* The slope is calculated with the intercept of the trend line / the first value of the trend (a/i0)
** A threshold of 5% is used to indicate whether the value is significant or not.

3.4 Indicator Issues, Problems and Caveats

3.4.1 General Considerations

In line with the meeting TOR EWG 17-08 considered the technical, economic and biological indicators contained in the 2014 Balance Indicator Guidelines (COM 2014, 545 final), and commented on the balance or imbalance for the fleet segments provided according to the criteria of the guidelines.

The group could not assess in any detail the reliability of the data and indicator values which were made available in the limited time available. For biological indicators several errors were noted and corrected during the EWG 17-08 Prep. Meeting as well as during EWG 17-08, but it was not possible to fully assess the reliability of the data that were used to calculate indicator values. Instead, additional information on, for instance, the coverage of the indicator was provided (see section 4.2.3). Further checking and/or peer review by experts from a wider range of Member States would thus have been appropriate prior to using the indicator values for the purpose of the EWG. For the technical and economic indicators, it was assumed that the 2017 AER EWGs 17-01 and 17-06 had already quality checked the data. In some cases, the assessment of the

economic indicators was made difficult because of the use of inconsistent clustering of fleet segments over time by some MS, although overall there was an improvement in the clustering consistency.

Comments on whether specific fleet segments are in or out of balance with their fishing opportunities were made by EWG 17-08 based on the 2014 Balance Indicator Guidelines as requested by the TOR. The EWG nevertheless recognises and acknowledges that deciding whether a fleet segment is in, or out of balance with its fishing opportunities is a judgement which must include consideration of political aims and preferences and also depends on the individual characteristics of fleet segments, communities and fisheries. Such a judgement call should ultimately be made by fisheries management decision makers with relevant regional expertise.

Comments on indicator trends were automatically generated using a series of filters. The EWG considers that such automatically generated filters give better consistency than asking experts to comment on trends. EWG 17-08 considers that the definitions and thresholds used should in future be tested in more detail. Indicator specific methods may in future increase the accuracy of indicator trends, for instance the use of a moving average for the economic indicators could be considered due to the high level of fluctuations in some indicator values.

3.4.2 Biological Indicator Considerations

General issues, problems and caveats that affect the overall reliability of the biological indicators specified in the 2014 Balance Indicator Guidelines have already been highlighted in the STECF 15-02, 15-15, and 16-09 reports, and a summary of proposed actions was presented in Annex I of STECF 16-09. To avoid repetition caveats which were already discussed by previous EWGs are not repeated here. With regards to the efficiency of the indicator calculation process EWG 17-08 observes that a database where stock assessment data coming from all RFMOs is still lacking. Moreover, the cessation of the STECF Consolidated Review of Scientific Advice reports in 2014 caused difficulties for the compilation of stock advice, especially in the case of OFR areas. Another problem for the calculation of the biological indicators arises from the aggregated species groups (see Annex II).

A new issue encountered for the first time by EWG 17-08 was the fact in parallel to the calculation of the SHI and SAR indicators ICES was revising its list of stock codes in order to render the generation of ICES stock advice sheets more efficient. This process was ongoing at the time of the indicator preparation meeting, but had been completed by ICES by the time EWG 17-08 took place. This necessitated making a number of revisions to the SHI and SAR databases and careful revision in order to avoid errors, which ultimately resulted in a delay with the provision of the indicator tables to experts.

3.4.2.1 Sustainable Harvest Indicator (SHI)

EWG 17-08 Prep. Meeting participants noted that the list of F/F_{MSY} ratios in the JRC database includes only the outcomes of the assessment carried out in the framework of STECF meetings. In order to further increase the accuracy of the SHI calculation for the Mediterranean, information on F and F_{MSY} timeseries was therefore extracted from

reports of the GFCM Working Group on Stock Assessment of Demersal Species (WGSAD), the Working Group on Stock Assessment of Pelagic Species (WGSAP), as well as stock assessment forms available online (http://www.fao.org/gfcm/data/safs/en/; Table 4.4.2.1).

EWG 17-08 Prep. Meeting notes that this was a time consuming process since in many cases data has to manually be extracted from graphs provided in stock assessment forms, and considers that a single database with a complete list of updated assessments (as is available for the ICES region) should be required for the Mediterranean and Black Sea and for high migratory species especially looking for Tuna species assessments. For Tuna, F/F_{MSY} has been collected through ICCAT and IOTC but sometimes reports only provide short time series.

In cases where stock assessments were available from more than one source, the more updated stock assessment was taken into account for SHI calculations. Where STECF and GFCM assessment were available and values of F and/or F_{MSY} differed, both assessments were retained and the SHI calculations were based on an average of the two assessment results.

A further difficulty encountered by the EWG 17-08 Prep. Meeting participants was the fact that some recent stock assessment outcomes are available for both single and combined GSAs. Only in the case of deep-water rose shrimp in GSAs 17-18-19 and giant red shrimp in GSAs 18-19, STECF PLEN 16-01 advised to use a combined GSA assessment rather than single GSA assessments for scientific advice. Such advice was based mainly on the outcomes of StockMed project (Fiorentino et al., 2014)[5] And was adopted by the EWG 17-08 Prep. meeting. However, in the case of spottail mantis shrimp (*Squilla mantis*) in GSAs 17-18, the SHI estimates also took into account the assessment carried by single GSA during STECF EWG 15-11, because the species was not analyzed in the framework of StockMed project and there is no evidence that the combined assessment would better reflect the status of the stock.

[5] Fiorentino F., E. Massutì, F. Tinti, S. Somarakis, G. Garofalo, T. Russo, M.T. Facchini, P.Carbonara, K. Kapiris, P. Tugores, R. Cannas, C. Tsigenopoulos, B. Patti, F. Colloca, M. Sbrana, R. Mifsud, V. Valavanis, and M.T. Spedicato (2014). Stock units: Identification of distinct biological units (stock units) for different fish and shellfish species and among different GFCM-GSA. STOCKMED Deliverable 03: FINAL REPORT. 215 pp.

Table 4.4.2.1. Source of stock assessment data for Mediterranean (Area 37) fleet segment SHI calculations.

STECF	
Stock	**Evaluation Year**
ane-gsa06	2016
ane-gsa09	2016
ane-gsa17_18	2016
ane-gsa29	2015
ank-gsa05	2014
ank-gsa06	2014
ars-gsa10	2015
ars-gsa11	2015
ars-gsa18_19	2015
bss-gsa07	2016
dgs-gsa29	2015
dps-gsa01	2016
dps-gsa05	2013
dps-gsa06	2013
dps-gsa09	2016
dps-gsa09_10_11	2016
dps-gsa10	2016
dps-gsa17_18_19	2015
hke-gsa01	2013
hke-gsa01_05_06_07	2015
hke-gsa09_10_11	2015
hke-gsa10	2013
hke-gsa18	2013
hke-gsa19	2015
hmm-gsa29	2015
mon-gsa01_05_06_07	2016
mts-gsa17	2015
mts-gsa17_18	2015
mts-gsa18	2015
mur-gsa09	2016
mur-gsa15_16	2013
mut-gsa01	2014
mut-gsa05	2013
mut-gsa09	2014
mut-gsa11	2013
mut-gsa17_18	2015
mut-gsa19	2015
mut-gsa29	2015
nep-gsa05	2014
nep-gsa06	2016
nep-gsa09	2016
nep-gsa11	2016
nep-gsa15_16	2013
nep-gsa17_18	2016
pil-gsa06	2016
pil-gsa17_18	2016
rjc-gsa29	2015
sbg-gsa07	2016
sol-gsa07	2016
spr-gsa29	2015
tur-gsa29	2015
whb-gsa06	2014
whb-gsa09	2014
whg-gsa29	2015

GFCM	
Stock	**Evaluation Year**
ane-gsa17_18	2016
ara-gsa01	2016
ara-gsa05	2016
ara-gsa06	2016
ara-gsa09	2016
ars-gsa09	2016
dps-gsa12-13-14-15-16	2016
dps-gsa17_18	2016
dps-gsa19	2016
hke-gsa01_03	2016
hke-gsa05	2016
hke-gsa06	2016
hke-gsa07	2016
hke-gsa09	2016
hke-gsa12-13-14-15-16	2016
hke-gsa17_18	2016
mur-gsa05	2016
mut-gsa06	2016
mut-gsa07	2016
mut-gsa10	2014
mut-gsa13-14	2016
mut-gsa15-16	2016
mut-gsa17	2016
mut-gsa18	2016
mut-gsa25	2016
pil-gsa01	2016
pil-gsa01-03	2016
pil-gsa06	2016
pil-gsa16	2015
pil-gsa17_18	2016
sol-gsa17	2016
spc-gsa25	2016

STECF stock assessment data were extracted from a database supplied by the JRC and STECF 14-24[6] in the case of mantis shrimp (*Squilla mantis*) in GSA 17 / GSA 18. GFCM stock assessment data werre extracted from on-line GFCM stock assessment forms from 2017 working groups.

F_{MSY} Ranges

STECF 15-15 pointed out that proposals for stock management plans in the ICES area are currently taking into account F_{MSY} ranges. In such scenario SHI calculations would need to be revised to reflect the use of F_{MSY} ranges in management plans, a scenario for which the 2014 Balance Indicator Guidelines state: 'Where F_{MSY} is defined as a range, exceeding the upper end of the range is interpreted as "overfishing"'. The EWG 17-08 Prep. Meeting thus double checked whether F_{MSY} ranges instead of point estimates had been adopted as the basis for management. Only in the case of Western Baltic (subdivisions 22–24) cod (*Gadus morhua*) and herring (*Clupea harengus*) in subdivisions 25-29 and 32, and herring (*Clupea harengus*) in subdivision 28.1 the ICES advice for 2018 is based on the management plan and F_{MSY} ranges. As this report deals with data up to 2015, this management was not applicable at that time. The ICES MSY approach does also not include the F_{MSY} ranges and the ICES stock assessment database does not include the lower and upper ranges yet. In addition, to keep the consistency between regions and MS, SHI calculations continue to be based on point estimates of F_{MSY} for this year. However, once more management plans using F_{MSY} ranges are agreed, they should be considered for future calculations. One theoretical example comparing SHI based on Fmsy ranges or point estimate will be included in chapter 4.4.

One theoretical example comparing SHI based on Fmsy ranges and Fmsy point estimate is given below to highlight the potential impact on future results. In this example a fleet is fishing on two Baltic herring stocks. Both stocks are inside safe biological limits and therefore fishing mortalities between Fmsy and the upper limit of the range (Fmsy upper) are allowed according to the Baltic management plan. Depending on which reference point is used (Fmsy point or Fmsy range) SHI would decrease from 1 to 0.82 in this theoretical example. So, using Fmsy point estimates is considered more conservative.

[6] Scientific, Technical and Economic Committee for Fisheries (STECF) – Consolidated Advice on Fish Stocks of Interest to the European Union (STECF-14-24). 2014. Publications Office of the European Union, Luxembourg, EUR 27028 EN, JRC 93360, 747 pp.

Theoretical example:

Fmsy point

Year	Area	Fleet_code	Stock	Fmsy	F	Catches	F/Fmsy	F/Fmsy*Catches
2015	AREA27	X	her.27.25-2932	0.22	0.18	100	0.82	81.59
2015	AREA27	X	her.27.28	0.32	0.38	100	1.18	117.94

SHI (Fmsy point)	**1.00**

Fmsy ranges

Year	Area	Fleet_code	Stock	Fmsy upper	F	Catches	F/Fmsy	F/Fmsy*Catches
2015	AREA27	X	her.27.25-2932	0.28	0.18	100	0.64	64.10
2015	AREA27	X	her.27.28	0.38	0.38	100	0.99	100.69

SHI (Fmsy ranges)	**0.82**

3.4.2.2 Stocks at Risk Indicator (SAR)

Criterion 'a' specified for the identification of stocks at risk in the 2014 Balance Indicator guidelines was generally not applicable for most of the stocks in Mediterranean, since these stocks lack B_{lim} estimates. SAR selection in the Mediterranean and Black Sea was instead based mainly on criteria b – d of the 2014 Balance Indicator Guidelines. Whilst reviewing the SAR indicators it was clear that the interpretation of several criteria is subjective. The rationale of interpreting criterion b for the Mediterranean Sea should be further discussed by future EWGs / during a revision of the guidelines by the Commission.

Another issue discussed by experts was the fact that the SAR definition criterion 'c' necessitates the consideration of EC fishing opportunity regulations / GFCM Recommendations, which in some cases are gear specific. For example, according to Recommendation GFCM/36/2012/3, each Contracting member and non-Contracting Party (CPCs) shall ensure that catches of tope shark (*Galeorhinus galeus*) taken with bottom- set nets, longlines and tuna traps shall be promptly released unharmed and alive to the extent possible. EWG 17-08 used a coding system to distinguish gear prohibitions which are in place for such stocks. However, the temporal measures listed in such Regulations could not be included in the SAR selection criteria.

In some cases, the list of stocks at risk comprises units (defined by species name and distribution) are absent in both ICES table of stocks definitions and the Splitting table used to re-shape the input landings data. This issue forces the experts to consider these units as stand-alone entities, and generates unofficial stock codes. Moreover, it complicates the computation of the SAR indicator, which is largely based on the knowledge about stocks distribution.

3.4.2.3 Suggestion to improve the biological indicator calculation

Taking into account the issues faced by the group in the biological indicator calculation, EWG 17-08 proposes the implementation of a common database with the information required for the calculation of the SAR and SHI indicators early next year done by JRC or with ad-hoc contracts, in order to avoid data source retrieval during the preparatory meeting. The preparatory meeting could instead be divided in a first part dedicated to the check of inconsistencies in biological indicator data input, and a second part dedicated to the output check.
Moreover, EWG 17-08 suggests the possibility to contact BlueBRIDGE project (http://www.bluebridge-vres.eu/) to take advantages of the establishment of a global record of stocks and fisheries knowledge base foreseen by the project.
Moreover, the group noticed that ICES is currently providing F_{MSY} proxy values for more and more of the Data Limited Stocks (DLS). This means that the SHI indicator may be calculated including information from these stocks. However, the actual values for current F divided by the F_{MSY} proxy (Ft/F_{MSY} proxy) are in most cases not yet provided by ICES, neither in the ICES advice sheets nor in the stock assessment database. The reason is that often the assessments still use just a survey index, while the determination of reference points is carried out e.g., with a production model and only the qualitative information on stock status is used for advice. Therefore, the information on the stock status of DLS stocks could not be used for this year's SHI calculations. The EWG 17-08 suggests starting a dialog with ICES to explore the possibility that information on Ft/F_{MSY} proxy is made available in the future, and to discuss for which stocks the information is robust enough given the uncertainties around these estimates.
More in general EWG 17-08 suggests that bilateral meetings between STECF/JRC and relevant RFMOs should be arranged in order to inform RFMOs about STECF Balance EWGs, improve coordination in general, and coolaborate on the provision of accurate input data for the biological indicators in particular..

3.4.3 Economical and Technical Indicator Considerations

General issues, problems and caveats which affect the overall reliability of the economic and technical indicators specified in the 2014 Balance Indicator Guidelines have already been highlighted in the STECF 15-02 and 15-15 reports and in STECF 16-09, and one additional caveat discussed in some detail by EWG 17-08 is presented below.

<u>The economic indicators of ROI/RoFTA and CR/BER</u>

There are a number of issues with the economic indicators for assessment of balance, some of which have been highlighted in previous reports and some issues which have not. The two main economic indicators are return on investment (ROI)/return on fixed tangible assets (RoFTA) and current revenue against breakeven revenue (CR/BER). Historically, in STECF working groups on balance these two indicators were considered to indicate respectively the long term and short term economic performance of fleet segments. ROI/RoFTA was considered to be a long term economic indicator as it incorporates opportunity costs while CR/BER was considered to be a short term indicator as it excluded opportunity and depreciation costs. There are a number of issues with this understanding of the indicators.

First, there is a timespan issue that in reality makes these indicators both short-term. Both of these indicators depend on the net and gross profit in the latest year of data, respectively. Therefore, for the ROI/RoFTA indicator the result is a short-term economic indicator based on net profit, or in other words the resource rent generated by the fleet segment. There are no long-term aspects to this result as it is an annual result which is

subject to the annual performance. Consequently, the correlation between the results of both indicators is generally over 90% for all fleet segments analysed. There is hence clear redundancy in using this combination of indicators. A simpler economic indicator that informs of the short-term economic performance is net profit margin.

Second, there are no targets in the long-term for economic results of fishing fleets like there are for the biological indicators (Fmsy). The results of both economic indicators are compared to zero generation of resource rent in the case of ROI/RoFTA and zero gross profits for CR/BER. Clearly these are not ambitious targets for EU fishing fleets.

3.4.3.1 Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

EWG 17-08 notes that different approaches are taken when estimating the ROI and/or RoFTA indicators by the Annual Economic Report (AER) and Balance expert working groups. The 2014 Balance indicator Guidelines specify that the indicator is to be compared against the 'low risk long term interest rate'. The guidelines further suggest to use the 'arithmetic average interest rate for the previous 5 years'. On the other hand, the AER uses the 'real interest rate' when calculating the Opportunity cost of Capital, which would then be used as the reference point if or when assessing ROI or RoFTA in the AER. EWG 16-09 participants considered the discussion of this issue presented in Annex 1 of the AER 2016, as well as the possible ways forward presented by AER 2016 participants. Until the 2014 Balance Indicator Guidelines are amended Balance EWGs are however not in a position to amend the manner in which the ROI and/or RoFTA indicators are calculated.

3.4.3.2 Ratio Current Revenue and Break-Even Revenue (CR/BER)

The *CR/BER* measures the economic capability of the fleet segment to keep fishing on a day-by-day basis. According to the 2014 Balance Indicator Guidelines, the *CR/BER* is calculated as: *CR/BER = Revenue / Break-Even Revenue*; where the *Revenue* considers income from landings and other income*, w*hile the *Break-Even Revenue* (*BER*) accounts for fixed and variable costs. However, the same Indicator Guidelines allow for the possibility to include the opportunity cost of capital and the depreciation costs in the estimation.

STECF 15-15 decided not to consider the opportunity cost of capital in the break even revenue calculations in order to differentiate from the ROI and RoTA indicators, and provide a more short-term approach. However, as mentioned in the introduction to this chapter, this indicator provides little extra information than the ROI/RoFTA given that both indicators use a measure of profitability in one year. The results of this indicator are generally the same as ROI/RoFTA and so serious consideration should be given to excluding its use in future works on balance.

EWG 17-08 reiterates the previous comment that due to the volatile nature of variable costs associated with fishing, the CR/BER indicator values may fluctuate considerably from one year to the next.

3.4.3.3 The Inactive Fleet Indicators

EWG 17-08 stresses again that especially in fleet segments with under 10 m vessels (small-scale coastal fleets), many vessels are only used part time and fishing is often not

the only source of income. Therefore, this indicator needs to be treated with care and does not necessarily indicate that these fleet segments are not in balance.

Within the current data file provided by the JRC, EWG 17-08 notes that the inactive fleet indicators (by vessel numbers, GTs and kWs) estimated by length class do not provide appropriate measures of the inactivity level within the length class or each length class inactivity is measured as the percentage of the entire fleet rather than the percentage of inactivity within the length class. The current method allows identification of the length class that contributes most to the overall fleet inactivity however this method masks the level of inactivity within the length class. An alternative and more appropriate measure of the inactivity level within a length class can be obtained by dividing the number of inactive vessels in the class by the total number of vessels in the same length class. This alternative method could be provided in the data file alongside the current format.

Additionally, MS could comment in their fleet reports on the nature of the levels of inactivity within length classes and overall for the entire fleet in particular on whether the levels of inactivity are due to vessel registration processes at the national level or if these levels represent latent fishing capacity.

3.4.3.4 The Vessel Use Indicator

As for the inactive fleet indicator EWG 17-08 notes that for the VUR indicator, the small-scale fleet should be treated differently due to the fact that many fishers are only working part-time or fishing is only one source of income.

3.5 Indicator Findings – Regional Overviews

3.5.1 Area 27 – Northeast Atlantic

<u>Sustainable Harvest Indicator (SHI)</u>

Out of 353 fleet segments active in 2015, landings in value have been provided aggregated in 311 fleet segments and SHI indicator values were available for 294.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 160 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for the 134 fleet segments for which, according to the 2014 guidelines, the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 63% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

- 85 fleet segments appear to be not in balance with their fishing opportunities;
- 49 fleet segments appear to be in balance with their fishing opportunities.

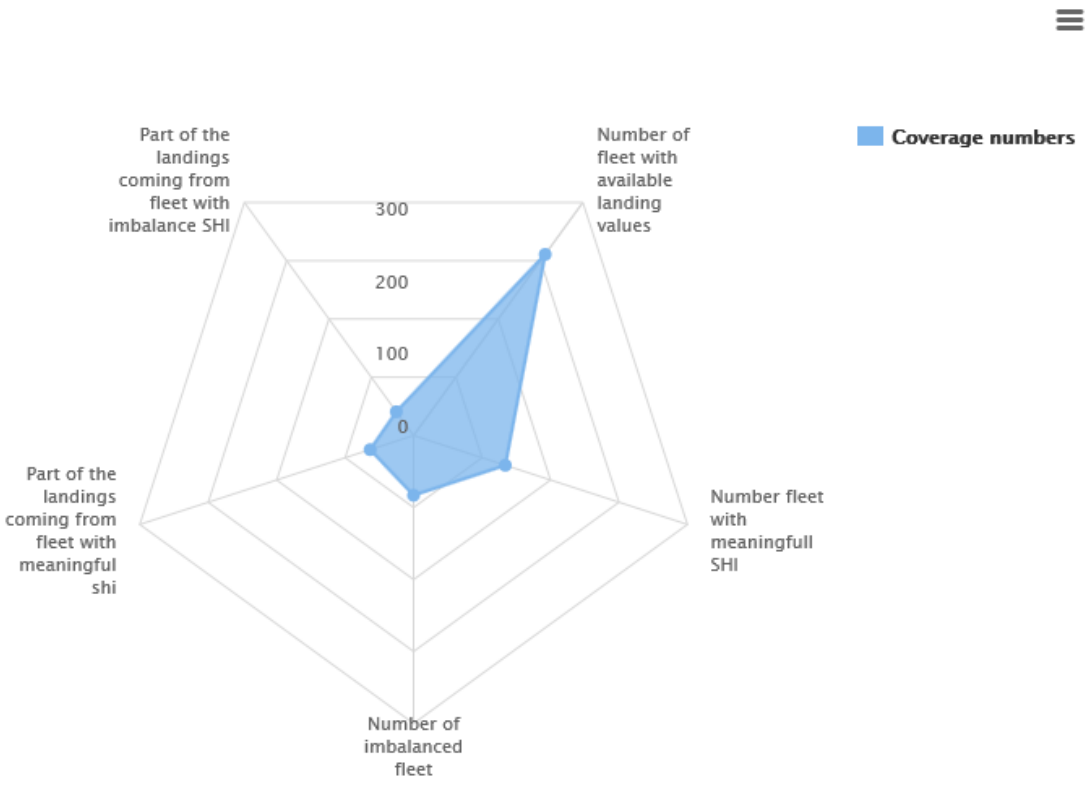


Figure 4.5.1.1. Diagram showing the SHI indicator information available for Area 27.

Stocks at Risk Indicator (SAR)

SAR indicator was provided aggregated for 243 of the 353 active fleet segments in 2015.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 243 fleet segments appear to be in balance with their fishing opportunities;
- 69 fleet segments appear tobe not in balance with their fishing opportunities. The number of SAR stocks identified for these fleet segments were as follows:
    - 47 fleet segments with 1 SAR;
    - 10 fleet segments with 2 SAR;
    - 7 fleet segments with 3 SAR;
    - 1 fleet segment with 4 SAR.
    - 3 fleet segments with 5 SAR.
    - 1 fleet segment with 6 SAR.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

In 2015, there are 534 active fleet segments in the Area 27 covering 15 EU countries. After clustering these amount to 276 segments.

The number of fleet segments for which the *ROFTA* indicator is available for 2015 is 258 and the number of segments for which trends are calculated is 208. Although for some countries ROI is available (RoI is available for fleet segments in 5 MS.), ROFTA is available for all countries and used for this regional analysis.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the RoFTA indicator values for the 217 fleet segments indicate that:

- 164 fleet segments appear to be in balance with their fishing opportunities.
- 21 fleet segments appear tobe not in balance with their fishing opportunities;
-
- 6 fleet segments are classified as not sufficiently profitable.

For 151 segments an increasing trend is assessed for *ROFTA* while a decreasing trend is observed for 58 segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the *CR/BER* indicator is available is 258.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the 217 fleet segments for which balance/out of balance was calculated indicate that:

- 170 fleet segments appear to be in balance with their fishing opportunities.
- 47 fleet segments appear to be not in balance with their fishing opportunities;
-

The Inactive Fleet Indicators

In the European inactive fleets in Area 27 there are 76 fleet segments with 10,451 inactive vessels reported for 2016. 10 fleet segments show decreasing trend in the number of inactive vessels and 8 showed increasing trend, others with no clear trend.

The Vessel Use Indicator

In the Area 27 the number of fleet segments for which the Vessel Use Indicator is available is 173. According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for segments in the Area 27 indicate that:

- 96 fleet segments appear to be in balance with their fishing opportunities;
- 77 fleet segments appear to be not in balance with their fishing opportunities.

For 21 segments an increasing trend is assessed for Vessel Use Indicator while a decreasing trend is observed also for 21 segments.

3.5.2 Area 37 – Mediterranean and Black Sea

Sustainable Harvest Indicator (SHI)

Out of 209 fleet segments active in 2015, landings in value have been provided aggregated in 186 fleet segments and SHI indicator values were available for 161.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 88 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for the 73 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 63% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

- 66 fleet segments appear to be not in balance with their fishing opportunities;
- 7 fleet segments appear to be in balance with their fishing opportunities.

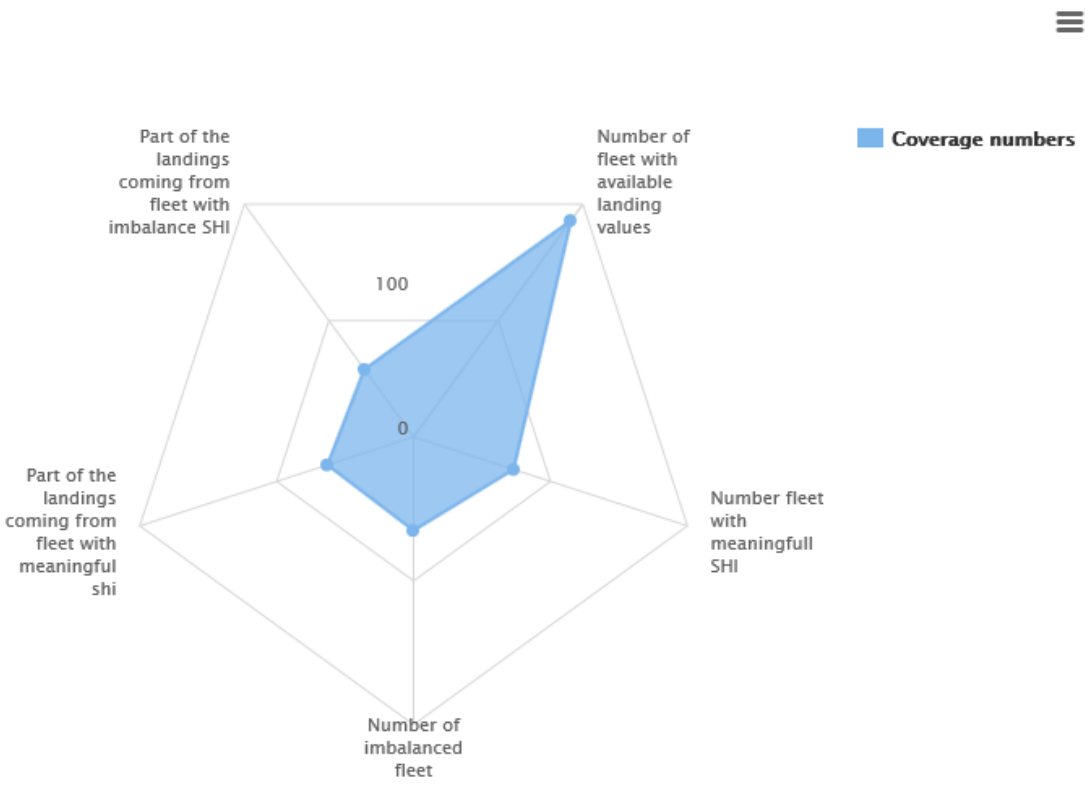


Figure 4.5.2.1. Diagram showing the SHI indicator information available for Area 37.

Stocks at Risk Indicator (SAR)

SAR indicator was provided aggregated for 186 of 209 active fleet segments in 2015.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 178 fleet segments appear to be in balance with their fishing opportunities;
- 8 fleet segments appear to be not in balance with their fishing opportunities. The number of SAR stocks identified for these fleet segments were as follows:
  - 6 fleet segments with 1 SAR;
  - 2 fleet segments with 2 SAR.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

In 2015, there are 248 fleet segments in Area 37. After clustering these amount to 150 segments.

The number of fleet segments for which the *ROFTA* indicator is available for 2015 is 143 and the number of segments for which trends are calculated is 133.

According to the criteria in the 2015 Balance Indicator Guidelines EWG 17-08 notes that the RoFTA indicator values for the 144 Area 37 fleet segments indicate that:

- 59 fleet segments appear to be not in balance with their fishing opportunities;
- 74 fleet segments appear to be in balance with their fishing opportunities;
- 10 fleet segments appear to be not sufficiently profitable.

For 87 segments an increasing trend is assessed for *ROFTA* while a decreasing trend is observed for 46 segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the *CR/BER* indicator is available is 143 while trends are assessed for 133.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the 144 Area 37 fleet segments indicate that:

- 67 fleet segments appear to be not in balance with their fishing opportunities;
- 76 fleet segments appear to be in balance with their fishing opportunities.

For 38 fleet segments a decreasing trend is assessed, for 80 fleet segments an increasing trend is assessed while for 15 no trend is assessed.

The Inactive Fleet Indicators

In 2016 there were 35 fleet segments in the inactive European fleets located in Area 37 with trends assessed for 34.

An increasing trend was assessed for 5 segments, 16 segments show a decreasing trend while the remaining 13 segments showed no trend.

While of course they produce no *ROFTA*, *CR/BER*, or *VUR/VUR220* statistics, they still remain a potential complement to the existing capacity of the fleets and have the potential to delay or frustrate the success of direct measures to bring overcapacity into line with the available fishing opportunities by returning to the active fleets.

In the European Union inactive fleets in Area 37 there are 4,954 inactive vessels reported for 2016, all but 379 of them under 12m (hence only 8% of the total inactive vessel numbers are above 12m).

Overall, inactivity in vessel numbers has fallen by one third in 2016 compared to 2015. Inactivity rose in Malta, Romania, Slovenia and Cyprus to small degrees. Italy and France have seen marginal decreases in inactivity of 1% while in Bulgaria it has fallen by 10%. The driver of the overall reduction in regional inactivity was Croatia. Here, inactivity fell by 50%. This is interesting as in last year's report inactivity for Croatia trebled from the previous year. The reason for this considerable fluctuation (over 2500 vessels) is explained by the national registration of 3500 vessels into the SSCF in 2015.

There are 8 Member States that compose these inactive fleets with no major trends identifiable except for the Croatian fleet, which has seen a large reduction in inactivity
The fleet segments with the highest inactivity in AREA 37 are

The Vessel Use Indicator

In the Area 37 the number of fleet segments for which the Vessel Use Indicator is available is 126. According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for segments in the Area 27 indicate that:

- 70 fleet segments appear to be in balance with their fishing opportunities;
- 56 fleet segments appear to be not in balance with their fishing opportunities.

For 22 segments, an increasing trend is assessed for Vessel Use Indicator while a decreasing trend is observed also for 11 segments.

3.5.3 OFR – EU Distant Waters and Outermost Regions

Sustainable Harvest Indicator (SHI)

Out of 59 fleet segments active in 2015, landings in value have been provided aggregated in 53 fleet segments and SHI indicator values were available for 39.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 25 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for the 14 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 40% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

- 7 fleet segments appear to be not in balance with their fishing opportunities;
- 7 fleet segments appear to be in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance showed no evident trend for 6 fleet segments.

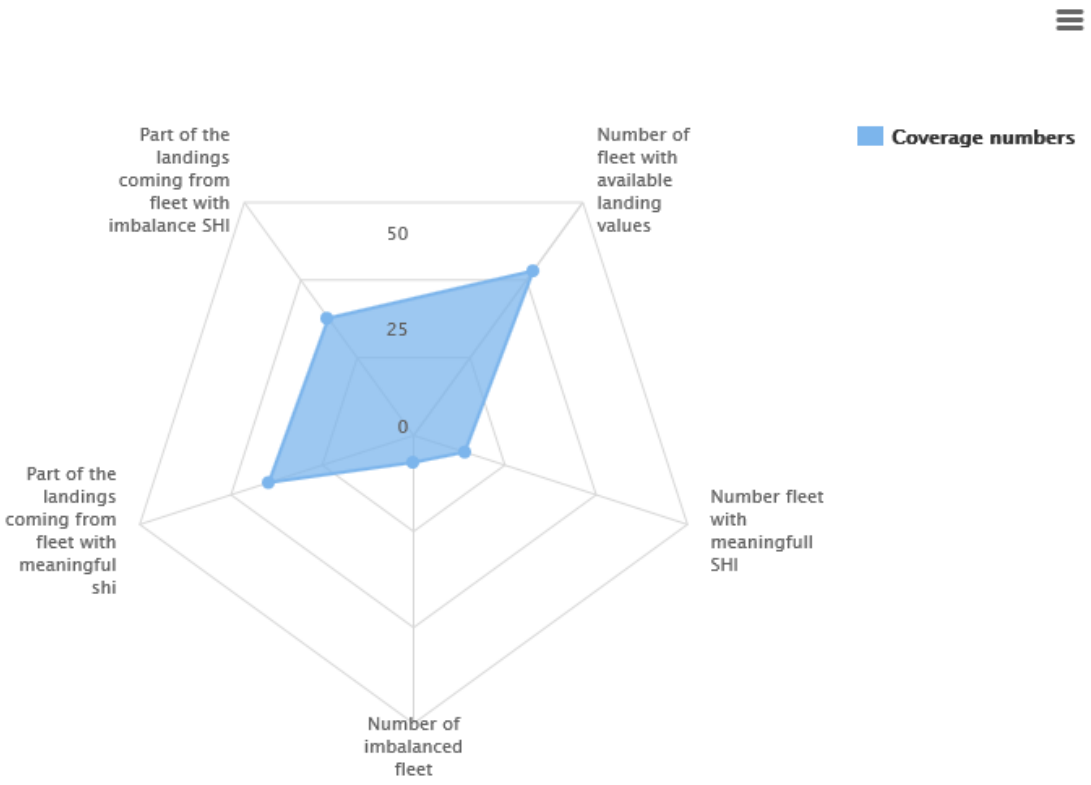


Figure 4.5.3.1 Diagram showing the SHI indicator information available for OFR.

Stocks at Risk Indicator (SAR)

SAR indicator was provided aggregated for 55 of 59 active fleet segments in 2015.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 52 fleet segments appear to be in balance with their fishing opportunities;
- 3 fleet segments appear to be not in balance with their fishing opportunities. The number of SAR stocks identified for these fleet segments were as follows:
    - 3 fleet segments with 1 SAR.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

In the OFR region there are 69 fleet segments in total for which a RoFTA indicator is available for 22, of which 19 show trends.

According to the criteria in the 2015 Balance Indicator Guidelines EWG 17-08 notes that the RoFTA indicator values for the 22 fleet segments indicate that:

- 9 fleet segments appear to be not in balance with their fishing opportunities;
- 12 fleet segments appear to be in balance with their fishing opportunities;
- 1 fleet segment appears to be not sufficiently profitable.

For 11 segments an increasing trend is assessed for *ROFTA* while a decreasing trend is observed for 8 segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

In the OFR region the number of fleet segments for which the *CR/BER* indicator is available is 22 with trends assessed for 19.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the 24 fleet segments indicate that:

- 9 fleet segments appear to be not in balance with their fishing opportunities;
- 13 fleet segments appear to be in balance with their fishing opportunities.

For 6 segments a decreasing trend is shown, for 12 segments an increasing trend is shown while one segment shows no trend.

The Inactive Fleet Indicators

In 2016, only two countries, France and Lithuania, reported 4 vessel length segments that had inactive vessels (*VL0010, VL1012, VL1218, VL1824, VL2440, VL40XX)*.

The fleet segments with the highest levels of inactivity are the *VL0010* group at 11% in France 2016, and the *VL40XX* group in Lithuania at 1% (2016).

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 37 and trends are available for 30 segments.
According to the criteria in the 2015 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the OFR segments, indicate that:

- 16 fleet segments appear to be not in balance with their fishing opportunities;
- 21 fleet segments appear to be in balance with their fishing opportunities.

For 13 segments an increasing trend is assessed for Vessel Use Indicator while a decreasing trend is observed for 1 segment and no trend is observed for 16 segments.

3.6 Indicator Findings – National Sections[7]

3.6.1 Belgium (BEL)

Sustainable Harvest Indicator (SHI)

Out of 8 fleet segments active in 2015, landings in value have been provided clustered in 4 fleet segments and SHI indicator values were available for all 4.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 1 fleet segment cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that the 3 fleet segments for which the 2015 SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 98.6% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

- 3 fleet segments appear to be not in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance were decreasing for all 3 fleet segments.

Stocks at Risk Indicator (SAR)

Out of 8 fleet segments active in 2015, landings have been provided aggregated in 4 fleet segments and SAR indicator values were available for all 4.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 3 fleet segments appear to be in balance with their fishing opportunities.
- 1 fleet segment appears to be not in balance with their fishing opportunities. For this fleet segment 1 SAR was identified.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

There are 12 fleet segments in the Belgian fleet. After clustering these amount to 4 segments.

The number of fleet segments for which the *ROFTA* indicator is available for 2014 is 4 and the number of segments for which trends are calculated is 4.

[7] Complimentary data for SHI and SAR are available in ANNEXES III-V

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the RoFTA indicator values for the 4 Belgian fleet segments indicate that:

- 2 fleet segments appear to be not in balance with their fishing opportunities
- 2 fleet segments appear to be in balance with their fishing opportunities

For 3 segments an increasing trend is assessed for *ROFTA* while a decreasing trend is observed for 1 segment.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the *CR/BER* indicator is available is 4.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the 4 Belgian fleet segments indicate that:

- 2 fleet segments appear to be not in balance with their fishing opportunities
- 2 fleet segments appear to be in balance with their fishing opportunities

For 2 segments an increasing trend is shown while the other two segments show no trend.

The Inactive Fleet Indicators

In 2016, 4 vessel length segments had inactive vessels (VL1012, VL1218, VL1824, *VL2440)*. These length classes are clustered into one segment (VL2440).

The total inactive Belgian vessels account for 12% of the total number of vessels, 5% of the total GT and 7% of the total kW.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 4.
According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the 4 Belgian segments indicate that:

- 0 fleet segment appears to be not in balance with their fishing opportunities (0 segments below 12m and 0 above 12m);
- 4 fleet segments appear to be in balance with their fishing opportunities (0 segments below 12m and 4 above 12m).

For 3 segments no trend is assessed for Vessel Use Indicator while an increasing trend is observed for 1 segment.

Data Issues

No major issues need to be reported.

3.6.2 Bulgaria (BGR)

Sustainable Harvest Indicator (SHI)

Out of 23 active fleet segments in 2015, the SHI indicator was available for 23.

According to the criteria in the 2015 Balance Indicator Guidelines, the SHI indicator values for 8 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that the 16 fleet segments for which the 2015 SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 60.7% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleets indicate:

- 16 fleet segments appear to be not in balance with their fishing opportunities;

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance were increasing for 9, decreasing for 6 fleet segments and with no evident trend for 1 fleet segment.

Stocks at Risk Indicator (SAR)

SAR indicator was available for all the 23 active fleet segments in 2015

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 17 fleet segments appear to be in balance with their fishing opportunities;
- 6 fleet segments appear to be not in balance with their fishing opportunities. The number of SAR stocks identified for these fleets were as follows:
    - 4 fleet segments with 1 SAR,
    - 2 fleet segments with 2 SAR.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

There were 27 fleet segments in the Bulgarian fleet in 2015. After clustering these amount to 16 segments.

The number of fleet segments for which the *ROFTA* indicator is available for 2015 is 16 and the number of segments for which trends are calculated is 16.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the ROFTA indicator values for the Bulgarian fleet segments indicate that:

- 7 fleet segments appear to be not in balance with their fishing opportunities;
- 7 fleet segments may appear to be in balance with their fishing opportunities;
- 2 fleet segments may appear to be not sufficiently profitable.

For ten segments an increasing trend is assessed for *ROFTA* while a decreasing trend is assessed for the other six segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the *CR/BER* indicator is available is 16.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the Bulgarian fleet segments indicate that:

- 9 fleet segments appear to be not in balance with their fishing opportunities;
- 7 fleet segments appear to be in balance with their fishing opportunities.

For nine segments an increasing trend is assessed for CR/BER, for six segments a decreasing trend is assessed while for one segment no trend is assessed.

The Inactive Fleet Indicators

In 2016, 4 vessel length classes had inactive vessels (*VL0006, VL0612, VL1218, VL1824)*. The total inactive Bulgarian vessels account for 37% of the total number of vessels, 20% of the total GT and 27% of the total kW.

The fleet segments with the highest levels of inactivity are the *VL0612* group at 24% in terms of number of vessels and at 22% in terms of kW.

All length classes show a decreasing trend in terms of vessel numbers, GT and kW and only one segment, VL0612, may appear out of balance.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 16.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the Bulgarian segments indicate that:

- 7 fleet segments appear to be not in balance with their fishing opportunities;
- 9 fleet segments appear to be in balance with their fishing opportunities.

No trends are assessed for any fleet segments for the Vessel Use Indicator.

Data Issues

As reported in the AER 2017 changes in data processing and estimation procedures have occurred in Bulgaria with missing data form years 2008-2012 estimated based on the proceeding years. Energy cost was calculated as a product of the multiplication of the hours at sea of each vessel in the segment, multiplied by the average reported litres per hour for the segment, based on the most reliable years, multiplied by the average price of the fuel during the year. The reason for differences between the value of landings and the total income for some fleet segments is different data sources.

3.6.3 Croatia (HRV)

Sustainable Harvest Indicator (SHI)

Out of 34 fleet segments active in 2015, and the SHI indicator values were available for 33.

According to the criteria in the 2014 Balance Indicator Guidelines, the 2015 SHI indicator values for 21 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that the 12 fleet segments for which the 2015 SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 78.2% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

• 12 fleet segments appear to be not in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance were increasing for 5, decreasing for 5 fleet segments and with no evident trend for 2 fleet segments.

Stocks at Risk Indicator (SAR)

Out of 34 fleet segments active in 2015, landings have been provided aggregated in 34 fleet segments and SAR indicator values were available for all of them.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate that all the 34 fleet segments appear to be in balance with their fishing opportunities.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

In 2015 there were 39 segments in the Croatian fleet of which 34 were active. After clustering, the *ROFTA* indicator was available for 23 segments, of which:

- 8 appeared to be *in balance* with their fishing opportunities,
- 10 appear to be not in balance,
- 5 appeared to be *not sufficiently profitable*.

Trends were calculated for 21 segments and all displayed an increasing trend.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

After clustering the *CR/BER* indicator was available for 23 segments, of which:

- 8 appeared to be *in balance* with their fishing opportunities.
- 15 appear to be not in balance.

Trends were calculated for 21 segments and all displayed an increasing trend.

The Inactive Fleet Indicators

Five vessel length segments (all Area 37) had inactive vessels: VL0006, VL0612, VL1218, VL1824, VL2440. These represented 64.0% of the total number of vessels, 39.2% of the total GT and 42.8% of the total kW. The fleet segments with the highest levels of inactivity were the VL0612 group with 39.0% of vessels inactive (16% GT, 25.9% kW), the VL0006 group with 22.7% of vessels inactive (4.4% GT, 7% kW), and the VL2440 group with 0.6% of vessels inactive (11.9% GT, 4.7% kW).

The Vessel Use Indicator

After clustering the vessel utilisation indicator was available for 23 segments, of which:

- 11 appeared to be *in balance* with their fishing opportunities,
- 12 appear to be not in balance*,* of which 9 are segments 0 – 12 m in length and 3 are segments above 12 metres LOA.

Trends were calculated for 21 segments, of which:

- 5 displayed an *increasing trend*,
- 3 displayed a *declining trend*,
- 13 displayed *no trend.*

Data Issues

According to the AER 2017 data may differ to previous years due to the improvements in data processing and estimating procedures, however no major differences were found in regards to trends. As Croatia has been a member of the EU since July 1st 2013, data submitted under the DCF is available for a short time series, therefore any conclusions on trends are limited.

3.6.4 Cyprus (CYP)

Sustainable Harvest Indicator (SHI)

Out of 6 active fleet segments in 2015, the SHI indicator was available for 6 of them. However, according to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for all 6 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

Stocks at Risk Indicator (SAR)

SAR indicator was available for all the 6 active fleet segments in 2015.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate that all the 6 fleet segments appear to be in balance with their fishing opportunities.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

There are 10 fleet segments in the Cypriot fleet. After clustering these amount to 6 segments in 2015.

The number of fleet segments for which the *ROFTA* indicator is available for 2015 is 6 and the number of segments for which trends are calculated is 6.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the RoFTA indicator values for the 6 Cypriot fleet segments indicate that:

- 6 fleet segments appear to be not in balance with their fishing opportunities;
- 0 fleet segment appears to be in balance with their fishing opportunities.

For 6 segments an increasing trend is assessed for *ROFTA* while no segments show a decreasing trend.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

Data exists for 10 segments while the number of fleet segments for which the *CR/BER* indicator is available is 6.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the 6 Cypriot fleet segments indicate that:

- 6 fleet segments appear to be not in balance with their fishing opportunities;
- No fleet segments appear to be in balance with their fishing opportunities.

Five segments show an increasing trend while 1 segment shows no trend.

The Inactive Fleet Indicators

In 2016, 5 Cypriot fleet segments were considered inactive (VL0006, VL0612, VL1218 and VL1824).

The total inactive vessels account for 8% of the number of Cypriot vessels, 6% of the total GTs and 8% of the total kW of the Cypriot fleet.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator (*VUR220*) is available is 6.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the 6 Cypriot segments indicate that:

- 6 fleet segments appear to be not in balance with their fishing opportunities;
- 0 fleet segment appears to be in balance with their fishing opportunities.

For all 6 segments no trend in the Vessel Use Indicator (*VUR220*) is observable.

Data Issues

According to the AER 2017 no major issue require reporting.

3.6.5 Denmark (DNK)

Sustainable Harvest Indicator (SHI)

Out of 19 active fleet segments in 2015, the SHI indicator was available for 18.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 3 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for the 15 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 95% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

- 12 fleet segments appear to be not in balance with their fishing opportunities;
- 3 fleet segments appear to be in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance were, decreasing for 7 fleet segments and with no evident trend for 8 fleet segments.

Stocks at Risk Indicator (SAR)

SAR indicator was available for all the 19 active fleet segments in 2015.
According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 10 fleet segments appear to be in balance with their fishing opportunities;
- 9 fleet segments appear to be not in balance with their fishing opportunities. The number of SAR stocks identified for these fleet segments were as follows:
    - 6 fleet segments with 1 SAR;
    - 2 fleet segments with 2 SAR;
    - 1 fleet segment with 3 SAR.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

In 2015, there are 19 active fleet segments (including clusters) in the Danish fleet.

The number of fleet segments for which the ROI indicator is available for 2015 is 19 and the trends are calculated for all of them.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the ROI indicator values for the 19 Danish fleet segments indicate that:

- 7 fleet segments appear to be not in balance with their fishing opportunities;
- 10 fleet segments appear to be in balance with their fishing opportunities;
- 2 fleet segments appear not to be sufficiently profitable.

For 15 segment(s) an increasing trend is assessed for ROI while a decreasing trend is observed for 4 segment(s).

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the CR/BER indicator is available is 19.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the 19 Danish fleet segments indicate that:

- 6 fleet segments appear to be not in balance with their fishing opportunities;
- 13 fleet segments appear to be in balance with their fishing opportunities.

The Inactive Fleet Indicators

No data on Danish inactive vessels is available for 2016.

The Vessel Use Indicator

No data on VUR is available and VUR220 was used in such a context.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR220 indicator values for the 19 Danish segments indicate that:

- 14 fleet segments appear to be not in balance with their fishing opportunities;
- 5 fleet segments appear to be in balance with their fishing opportunities.

For 17 segments no trend in the Vessel Use Indicator (VUR220) is observable, an increasing trend is observed for 1 segment and a decreasing one for another.

Quality of data

According to the AER 2017, data quality issues only rely on the unavailability of some capacity data (inactive vessels) for the latest year (2016).

3.6.6 Estonia (EST)

Sustainable Harvest Indicator (SHI)

Out of 7 active fleet segments in 2015, the SHI indicator was available for 6.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 1 fleet segment cannot be used meaningfully to assess the balance or imbalance because the indicator value is based on stocks that comprise less than 40% of the total value of landings by this fleet segment.

The EWG notes that for the 5 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 74% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

- 2 fleet segments appear to be not in balance with their fishing opportunities;
- 3 fleet segments appear to be in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance were with no evident trend for all the 5 fleet segments.

Stocks at Risk Indicator (SAR)

SAR indicator was available for all the 7 active fleet segments in 2015.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 7 fleet segments appear to be in balance with their fishing opportunities.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

There are 7 fleet segments in the Estonian fleet (some with very few vessels), and 4 segments remain after clustering.

The number of fleet segments for which the ROI indicator is available for 2015 is 4 and the trends are calculated for all of them.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the ROI indicator values for the Estonian fleet segments indicate that:

- 2 fleet segments appear to be in balance with their fishing opportunities;
- 2 fleet segments appear not to be sufficiently profitable.

For 2 segment(s) an increasing trend is assessed for ROI while a decreasing trend is observed for 2 segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the CR/BER indicator is available is 4.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the Estonian fleet segments indicate that all the 4 fleet segments appear to be in balance with their fishing opportunities.

The Inactive Fleet Indicators

In 2016, 1 vessel length segment had inactive vessels (VL1218).

The total inactive Estonian vessels in the one remaining fleet segment account for around 1% of the total number of vessels and total kW.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 2.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the Estonian segments indicate that the 2 fleet segments appear to be in balance with their fishing opportunities.

Data issues

Due to confidentiality reasons Estonia cannot provide economic data for the long distant fleet (VL40XX) in the AER 2017 and the Fleet Report.

3.6.7 Finland (FIN)

Sustainable Harvest Indicator (SHI)

Out of 9 fleet were active in 2015, landings in value have been provided aggregated in 5 fleet segments and SHI indicator values were available for all 5.

The values of the SHI for these fleet segments indicate:
According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 1 fleet segment cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for the 4 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 76% of the total value of the landings in 2015 provided by MS, and were as follows:

- 1 fleet segment appears to be not in balance with their fishing opportunities;
- 3 fleet segments appear to be in balance with their fishing opportunities.

In the period 2010-2015 the SHI indicator values considered meaningful to assess balance or imbalance were increasing for 1 fleet segment and with no evident trend for 3 fleet segments.

Stocks at Risk Indicator (SAR)

SAR indicator was available for all the 5 active fleet segments in 2015.
According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 4 fleet segments appear to be in balance with their fishing opportunities;
- 1 fleet segment with 1 SAR appear to be not in balance with their fishing opportunities.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

In 2015 there were 12 segments in the Finish fleet of which 9 were active and 3 inactive. After clustering, the *ROFTA* indicator was available for 5 segments, of which:

- 1 appeared to be *in balance* with their fishing opportunities,
- 4 appear to be not in balance.

Trends were calculated for 5 segments, of which:

- 2 displayed an *increasing trend*,
- 3 displayed a *declining trend*.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

After clustering the *CR/BER* indicator was available for 5 segments, of which:

- 1 appeared to be *in balance* with their fishing opportunities;
- 4 appear to be not in balance;

Trends were calculated for 5 segments, of which:

- 1 displayed an *increasing trend*,
- 1 displayed a *declining trend*,
- 3 displayed *no trend.*

The Inactive Fleet Indicators

Three vessel length segments (all Area 27) had inactive vessels: VL0010, VL1012, VL1218. These represented 42.0% of the total number of vessels, 18.9% of the total GT and 34.3% of the total kW. The fleet segment with the highest level of inactivity was the VL0010 group with 38.3% of vessels inactive (12.6% GT, 24.4% kW).

The Vessel Use Indicator

After clustering the vessel utilisation indicator was available for 5 segments, of which:

- 2 appeared to be *in balance* with their fishing opportunities;
- 3 appear to be not in balance*,* of which 2 are segments 0 – 12 m in length and 1 are segments above 12 metres LOA;

Trends were calculated for 5 segments, of which:

- 3 displayed an *increasing trend*,
- 2 displayed *no trend.*

Quality of data

According to the AER 2017Finland has modified the assumptions used in the Perpetual Inventory Method (PIM) regarding service life of each asset, depreciation rates and share of each asset in total value as well as the price per capacity used. These updates have greatly affected depreciated replacement values and the depreciation reported for the time series, affecting also the net profits of the sector.

3.6.8 France (FRA)

Sustainable Harvest Indicator (SHI)

Out of 98 fleet segments active in 2015, landings in value have been provided aggregated in 94 fleet segments and SHI indicator values were available for 81.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 52 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for the 29 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 41% of the total value of the landings in 2015 provided by MS, and were as follows:

- 16 fleet segments appear to be not in balance with their fishing opportunities;
- 13 fleet segments appear to be in balance with their fishing opportunities.

In the period 2010-2014 the SHI indicator values considered meaningful to assess balance or imbalance were increasing for 3 fleet segment, decreasing for 7 fleet segments, with no evident trend for 12 fleet segments, no conclusion for 6 fleet segment.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 94 active fleet segments in 2015

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 82 fleet segments appear to be in balance with their fishing opportunities;
- 12 fleet segments appear to be not in balance with their fishing opportunities.

The number of SAR stocks identified for these fleet segments were as follows:

- 9 fleet segments with 1 SAR;
- 1 fleet segment with 2 SAR;
- 1 fleet segment with 5 SAR;
- 1 fleet segment with 6 SAR.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

In 2015 there were 113 segments in the French fleet of which 99 were active and 14 inactive. After clustering, the *ROFTA* indicator was available for 50 segments, of which:

- 41 appeared to be *in balance* with their fishing opportunities,
- 8 appear to be not in balance,
- 1 appeared to be *not sufficiently profitable*.

Trends were calculated for 45 segments, of which:

- 31 displayed an *increasing trend*
- 14 displayed a *declining trend*

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

After clustering the *CR/BER* indicator was available for 50 segments, of which:

- 41 appeared to be in balance with their fishing opportunities;
- 9 appear to be not in balance.

Trends were calculated for 45 segments, of which:

- 18 displayed an *increasing trend*,
- 12 displayed a *declining trend*,

15 displayed *no trend.*

The Inactive Fleet Indicators

14 vessel length segments had inactive vessels:

- AREA27: *VL0010, VL1012, VL1218, VL1824, --------, VL40XX.*
- AREA37: *VL0006, VL0612, VL1218, VL1824, VL2440, VL40XX.*
- OFR: *VL0010, VL1012, --------, VL1824.*

These represented 17.2% of the total number of vessels, 3.8% of the total GT and 12.7% of the total kW. The fleet segments with the highest levels of inactivity were the OFR VL0010 group with 10.6% of vessels inactive (0.9% GT, 8.4% kW), and the Area 27 VL0010 group with 2.2% of vessels inactive (0.2% GT, 0.9% in kW).

The Vessel Use Indicator

After clustering the vessel utilisation indicator was available for 63 segments, of which:

- 26 appeared to be *in balance* with their fishing opportunities;
- 37 appear to be not in balance*,* of which 31 are segments 0 – 12 m in length and 6 are segments above 12 metres LOA;

Trends were calculated for 57 segments, of which:

- 13 displayed an *increasing trend*,
- 10 displayed a *declining trend*,
- 34 displayed *no trend.*

Data issues

According to the AER 2017 France has some minor data issues relating to historical capacity data (pre-2012). Coverage of capacity data is low for less than 12m vessels in the Mediterranean. Investments are reported with a low response rate.

3.6.9 Germany (DEU)

Sustainable Harvest Indicator (SHI)

Out of 21 fleet segments active in 2015, landings in value have been provided aggregated in 14 fleet segments and SHI indicator values were available for 14.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 5 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for the 9 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 76% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

- 9 fleet segments appear to be not in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance were decreasing for 5 fleet segments and with no evident trend for 4 fleet segments.

Stocks at Risk Indicator (SAR)

SAR indicator was available for all the 14 aggregated active fleet segments in 2015.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 5 fleet segments appear to be in balance with their fishing opportunities;
- 9 fleet segments appear to be not in balance with their fishing opportunities.

The number of SAR stocks identified for these fleet segments were as follows:

- 7 fleet segments with 1 SAR;

- 2 fleet segment with 2 SAR.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

In 2015, there are 26 fleet segments in the German fleet. After clustering these amount to 14 segments.

The number of fleet segments for which the *ROFTA* indicator is available for 2015 is 13 and the number of segments for which trends are calculated is 13.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the RoFTA indicator values for the 13 German fleet segments indicate that:

- 7 fleet segments appear to be not in balance with their fishing opportunities;
- 5 fleet segments appear to be in balance with their fishing opportunities;
- 1 fleet segment appears to be sufficiently profitable.

For 9 segments an increasing trend is assessed for ROFTA while a decreasing trend is observed for 4 segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the *CR/BER* indicator is available is 13.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the 13 German fleet segments indicate that:

- 7 fleet segments appear to be not in balance with their fishing opportunities;
- 6 fleet segments appear to be in balance with their fishing opportunities.

For 6 segments an increasing trend is assessed for CR/BER, for 2 segments a decreasing trend is observed while no trend is observed for 5 segments.

The Inactive Fleet Indicators

In 2016, 5 vessel length segments had inactive vessels (VL0010, VL1012, VL1218, VL1824, VL2440*)*.

The total inactive German vessels account for 26% of the total number of vessels, 3% of the total GT and 7% of the total kW.

The fleet segment with the highest levels of inactivity is the VL0010 group at 24%, in number and 3% in kW.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 13.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the 13 German fleet segments indicate that:

- 3 fleet segments (1 above 12 metres) appear to be not in balance with their fishing opportunities;

- 10 fleet segments (8 above 12 metres) appear to be in balance with their fishing opportunities.

For all 13 segments no trend is assessed for Vessel Use Indicator.

Data Issues

According to the AER 2017, there is no major data quality issues. Due to confidentiality issues, only capacity and weight of landings data are provided for the pelagic fleet.

3.6.10 Greece (GRC)

Sustainable Harvest Indicator (SHI)

Out of 15 fleet segments active in 2015, landings in value have been provided clustered for 2 fleet segments and SHI indicator values were available for 2 fleet segments.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 2 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

Stocks at Risk Indicator (SAR)

The SAR indicator was available for 13 of the 15 active fleet segments in 2015.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 13 fleet segments appear to be in balance with their fishing opportunities.

The AER 2017 considered the economic indicator estimated for Greece unreliable, therefore, such outputs are not presented here.

The Inactive Fleet Indicators

Greece did not provide any information on the number of inactive vessels in 2016.

In 2015, 3 vessel length classes had inactive vessels (VL0006, VL0612, VL1218).

The total inactive Greek vessels accounted for 7.74% of the total number of vessels, 5.41% of the total GT and 7.86% of the total kW.

The Vessel Use Indicator

Greece did not provide any information on the VUR.

Data Issues

Significant data issues were reported for Greece in the AER 2017. The National Programme has faced difficulties over the years which have led to interrupted time-series.

3.6.11 Ireland (IRL)

Sustainable Harvest Indicator (SHI)

Out of 32 fleet segments active in 2015, landings in value have been provided aggregated in 32 fleet segments and SHI indicator values were available for 28.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 15 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for the 13 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 82% of the total value of the landings in 2015 provided by MS, and were as follows

- 6 fleet segments appear to be not in balance with their fishing opportunities;
- 7 fleet segments appear to be in balance with their fishing opportunities.

In the period 2010-2015 the SHI indicator values considered meaningful to assess balance or imbalance were increasing for 2 fleet segments, decreasing for 2 fleet segments, with no evident trend for 9 fleet.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 32 active fleet segments in 2015

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 25 fleet segments appear to be in balance with their fishing opportunities;
- 7 fleet segments appear to be not in balance with their fishing opportunities. The number of SAR stocks identified for these fleet segments were as follows:
    - 5 fleet segments with 1 SAR stock;
    - 2 fleet segment with 3 SAR stocks;

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

In 2015, 32 fleet segments were active in the Irish fleet. As some of them were aggregated in providing economic data, a final number of 22 fleet segments can be considered for the analysis.

In 2015 the number of fleet segments for which the *ROFTA* indicator is available is 12 and the number of segments for which trends are calculated is 11.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the RoFTA indicator values for the Irish fleet segments indicate that:

- 6 fleet segments appear to be not in balance with their fishing opportunities, and a fleet segment is not sufficiently profitable;
- 5 fleet segments appear to be in balance with their fishing opportunities.

For 5 segments an increasing trend is assessed for *ROFTA* while a decreasing trend is observed for 6 segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the *CR/BER* indicator is available is 12 and the number of segments for which trends are calculated is 10.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the CR/BER indicator values for the Irish fleet segments indicate that:

- 6 fleet segments appear to be not in balance with their fishing opportunities;
- 6 fleet segments appear to be in balance with their fishing opportunities.

For 7 segments an increasing trend is assessed for *CR/BER* while a decreasing trend is observed for 3 segments.

The Inactive Fleet Indicators

In 2016, 5 vessel length classes had inactive vessels (*VL0010, VL1012, VL1218, VL1824, VL2440)*.

The total inactive Irish vessels account for 29.58% of the total number of vessels, and 6.43% of the total kW.

The length classes with the highest number of inactive vessels are the *VL0010* group at 24.96% of the total number of vessels and 0.71% of the total kW, and the *VL1012* group at 3.58% of the total number of vessels and 3.02% of the total kW.

A decreasing trend is registered in the levels of inactivity for all vessel length classes in terms of both number of vessels and total kW.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 16.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the VUR indicator values for the Irish segments indicate that:

- 9 fleet segments appear to be not in balance with their fishing opportunities;
- 7 fleet segments appear to be in balance with their fishing opportunities.

For 2 segments an increasing trend is assessed for Vessel Use Indicator while a decreasing trend is observed for 3 segments.

Data issues

Values and figures differ from previous reports as more survey returns changed the total national estimates. The survey target rates, however, differ between fleet segments.

3.6.12 Italy (ITA)

Sustainable Harvest Indicator (SHI)

Out of 35 fleet segments active in 2015, landings in value have been provided aggregated in 24 fleet segments and SHI indicator values were available for 22.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 6 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for the 16 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 11% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

- 15 fleet segments appear to be not in balance with their fishing opportunities;
- 1 fleet segment appear to be in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance were decreasing for 6 fleet segments, increasing for 4 with no evident trend for 6 fleet segments.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 24 active fleet segments in 2015

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate that all 24 fleet segments appear to be in balance with their fishing opportunities.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

There are 42 fleet segments in the Italian fleet. After clustering these amount to 23 segments.

The number of fleet segments for which the ROFTA indicator is available for 2015 is 23 and the number of segments for which trends are calculated is 21.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the RoFTA indicator values for the 23 Italian fleet segments indicate that:

- 4 fleet segments appear to be not in balance with their fishing opportunities;
- 18 fleet segments appear to be in balance with their fishing opportunities;
- 1 fleet segment appears to have insufficient profitability.

For 7 segments an increasing trend is assessed for ROFTA while a decreasing trend is observed for 14 segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the CR/BER indicator is available is 23.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the 23 Italian fleet segments indicate that:

- 5 fleet segments appear to be not in balance with their fishing opportunities;
- 18 fleet segments appear to be in balance with their fishing opportunities.

For 10 segments an increasing trend is assessed for CR/BER while a decreasing trend is observed for 6 segments. 5 segments report no trend and 2 make no report.

The Inactive Fleet Indicators

In 2016, 8 vessel length segments had inactive vessels (VL0006, VL0612, VL1218, VL1824, VL2440, VL40XX, VL40XXIWE, VL2440IWE).

The total inactive Italian vessels account for 8.7% of the total number of vessels, 4.3% of the total GT and 5.5% of the total kW.

The fleet segments with the highest levels of inactivity are the VL0612 group at 4.76%, and the VL0006 group at 2.7%.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 22.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the 23 Italian segments indicate that:

- 17 fleet segments appear to be not in balance with their fishing opportunities;
- 5 fleet segments appear to be in balance with their fishing opportunities.

For 2 segments an increasing trend is assessed for the Vessel Use Indicator while a decreasing trend is also observed for 2 segment(s). 18 segments report no trend.

Data Issues

In the Annual Economic Report 2017 the following data issues were reported:

No major data transmission issues to report. Due to confidentiality reasons, Italy only provides partial data on its distant water pelagic trawler fleet. This impacts on the AER as only incomplete coverage of the EU fleet is possible.

3.6.13 Latvia (LVA)

Sustainable Harvest Indicator (SHI)

There are 3 fleet segments in the Latvian fleet, no clustering is being performed.

The SHI indicator was available for all of the 3 active fleet segments.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 2 out of 3 fleet segments cannot be used meaningfully to assess the balance

or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that the fleet segment for which the 2015 SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 13% of the total value of the landings in 2015 provided by MS. The value of the 2015 SHI indicator for this fleet segment indicates that the fleet segment appear to be not in balance with its fishing opportunities. No evident trend could be derived for the period 2011 – 2015.

Stocks at Risk Indicator (SAR)

SAR indicator was available for all the 3 active fleet segments in 2015.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 3 fleet segment appear to be in balance with their fishing opportunities.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

The *ROFTA* indicator for 2015 is available for all 3 active fleet segments.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 RoFTA indicator values for the 3 Latvian fleet segments indicate that:

- All 3 fleet segments appear to be in balance with their fishing opportunities.

For 1 segments an increasing trend is assessed for ROFTA while a decreasing trend is observed for 2 segment.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)
The number of fleet segments for which the CR/BER indicator is available is 3.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the CR/BER indicator values for the 3 Latvian fleet segments indicate that:

- All 3 fleet segments appear to be in balance with their fishing opportunities.

The Inactive Fleet Indicators

In 2015, 1 vessel length segment had inactive vessels (VL0010).

The total inactive Latvian vessels account for 19% of the total number of vessels, 1% of the total GT and 3% of the total kW.

The Vessel Use Indicator
The number of fleet segments for which the Vessel Use Indicator is available is 3.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the VUR indicator values for the 3 Latvian fleet segments indicate that:

- 2 fleet segments appear to be not in balance with their fishing opportunities;
- 1 fleet segment appears to be in balance with its fishing opportunities.

No trend is observed for the 3 fleet segments

3.6.14 Lithuania (LTU)

Sustainable Harvest Indicator (SHI)

Out of 10 fleet segments active in 2015, landings in value have been provided clustered in 9 fleet segments and SHI indicator values were available for 8 fleet segments.

According to the criteria in the 2015 Balance Indicator Guidelines, the SHI indicator values for 5 fleet segment cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that the 3 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 11% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

- 1 fleet segment appear to be not in balance with their fishing opportunities.
- 2 fleet segments appear to be in balance with their fishing opportunities

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance showed no trend for 2 fleet segments, and for 1 fleet segment it was not possible to calculate a trend.

Stocks at Risk Indicator (SAR)

The SAR indicator was available for all the 10 active fleet segments in 2015.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 8 fleet segments appear to be in balance with their fishing opportunities;
- 2 fleet segments appear to be not in balance with their fishing opportunities. The number of SAR stocks identified for these fleet segments were as follows:
    - 2 fleet segments with 1 SAR.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

There are 10 fleet segments in the Lithuanian fleet. After clustering these amount to 5 segments.

The number of fleet segments for which the RoFTA indicator is available for 2015 is 5 and the number of segments for which trends are calculated is 5.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the RoFTA indicator values for the Lithuanian fleet segments indicate that:

- 2 fleet segment appear to be not in balance with their fishing opportunities;

- 2 fleet segments appear to be in balance with their fishing opportunities;
- 1 fleet segment appears to be sufficiently profitable.

For 1 segment an increasing trend is assessed for RoFTA while a decreasing trend is observed for 4 segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the CR/BER indicator is available is 5.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the Lithuanian fleet segments indicate that:

- 2 fleet segments appear to be not in balance with their fishing opportunities;
- 3 fleet segments appear to be in balance with their fishing opportunities

The Inactive Fleet Indicators

In 2016, 6 vessel length segments had inactive vessels (VL0010, VL1012, VL1218, VL1824, VL2440, VL40XX). The fleet segments with the highest levels of inactivity are the VL0010 group at 27.27% of total number of vessels and 0.28% of total kW, and the VL2440 group at 3.3% of total number of vessels and 0.73% of total kW.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 2.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the Lithuanian segments indicate that:

- 1 fleet segment appear to be not in balance with their fishing opportunities;
- 1 fleet segment appears to be in balance with their fishing opportunities.

For 1 segment an increasing and for 1 a decreasing trend is assessed for the Vessel Use Indicator.

Data Issues
No major issues were reported in the AER 2017 for Lithuania.

3.6.15 Malta (MLT)

Sustainable Harvest Indicator (SHI)

Out of 20 active fleet segments in 2015, the SHI indicator was available for 16.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 11 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

EWG 17-08 notes that the 5 fleet segments for which the 2015 SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 61% of the total value of the landings in 2015 provided by MS. The values of the 2015 SHI indicator for these fleet segments indicate that:

- 4 fleet segment appear to be not in balance with their fishing opportunities;
- 1 fleet segment appear to be in balance with their fishing opportunities.

In the period 2011-2015, the SHI indicator values considered meaningful to assess balance or imbalance, were increasing for 1 fleet segment, decreasing for 1 fleet segment and flat/null for 3 fleet segment.

Stocks at Risk Indicator (SAR)

SAR indicator was available for all 20 active fleet segments in 2015.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 20 fleet segments appear to be in balance with their fishing opportunities.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

The number of fleet segments for which the *ROFTA* indicator is available for 2015 is 20.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the RoFTA indicator values for the 20 Maltese fleet segments indicate that:

- 13 fleet segments appear to be not in balance with their fishing opportunities;
- 6 fleet segments appear to be in balance with their fishing opportunities.

For 14 segments an increasing trend is assessed for *ROFTA* while a decreasing trend is observed for 5 segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the *CR/BER* indicator is available is 20.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the CR/BER indicator values for the 20 Maltese fleet segments indicate that:

- 13 fleet segments appear to be not in balance with their fishing opportunities;
- 7 fleet segments appear to be in balance with their fishing opportunities.

For 13 segments an increasing trend is assessed for *CR/BER* while a decreasing trend is observed for 3 segments.

The Inactive Fleet Indicators

In 2015, 5 vessel length segments had inactive vessels (*VL0006, VL0612, VL1218, VL1824, VL2440)*.

The total inactive Maltese vessels account for 25% of the total number of vessels, 32% of the total GT and 24% of the total kW.

The fleet segments with the highest levels of inactivity are the *VL0612* group at 10% in vessel numbers (11% in kW), and the *VL0006* group at 13% in vessel numbers (4% in kW).

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 19.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that:

- 19 fleet segments appear to be in balance with their fishing opportunities

For 3 segments an increasing trend is assessed for Vessel Use Indicator while a decreasing trend is observed for another 3 segments.

3.6.16 Netherlands (NLD)

Sustainable Harvest Indicator (SHI)

Out of 28 fleet segments active in 2015, landings in value have been provided aggregated in 14 fleet segments and SHI indicator values were available for all 14.

According to the criteria in the 2015 Balance Indicator Guidelines, the SHI indicator values for all fleet segments can be used meaningfully to assess the balance or imbalance.

The EWG notes that for the 14 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 80% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

- 8 fleet segments appear to be not in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance were decreasing for 5 fleet segment and with no evident trend for 3 fleet segments.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 14 active fleet segments in 2015

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 13 fleet segments appear to be in balance with their fishing opportunities;
- 1 fleet segment with 1 SAR appear to be not in balance with their fishing opportunities.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

In 2015, there are 28 active fleet segments in the Dutch fleet. After clustering these amount to 14 segments.

Both ROI and RoFTA could be calculated for the Dutch fleet, therefore the ROI indicator is analysed. The number of fleet segments for which the *ROI* indicator is available for 2015 is 13 and the number of segments for which trends are calculated is 12.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the ROI indicator values for the 13 Dutch fleet segments which may be considered meaningful to assess balance or imbalance indicate that:

- 3 fleet segments appear to be not in balance with their fishing opportunities, and a fleet segment is not sufficiently profitable;
- 9 fleet segments appear to be in balance with their fishing opportunities.

For 11 segments an increasing trend is assessed for *ROI* while a decreasing trend is observed for 1 segment.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

In 2015, the number of fleet segments for which the *CR/BER* indicator is available is 14.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the 14 Dutch fleet segments indicate that:

- 3 fleet segments appear to be not in balance with their fishing opportunities;
- 11 fleet segments appear to be in balance with their fishing opportunities.

An increasing trend is assessed for *CR/BER* for all segments where trends have been calculated (13 on 14).

The Inactive Fleet Indicators

In 2016, 6 vessel length classes had inactive vessels (VL0010, VL1012, VL1218, VL1824, VL2440, VL40XX*)*.

The total inactive Dutch vessels account for 28.15% of the total number of vessels, 4.79% of the total GT and 9.56% of the total kW.

The length class with the highest number of inactive vessels is the VL0010 group at 18.72% in number and 2.36% in kW.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 14.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the 14 Dutch segments indicate that:

- 4 fleet segments appear to be not in balance with their fishing opportunities;
- 10 fleet segments appear to be in balance with their fishing opportunities.

For 3 segments an increasing trend is assessed for Vessel Use Indicator while no trend is observed for 11 segments.

Data Issues

According to the AER 2017, there is no major data quality issues.
According to the AER 2017: "*Some of the smaller segments (DRB 0-10 m, DTS 0-10 m and TBB 12-18 m) variation in activity levels was high resulting in high uncertainty in the economic indicators estimates and large fluctuations from year to year… Therefore, these figures should be viewed as indicative for the size of the sector rather than describing the exact trends. Currently work is being carried out to improve the estimation procedures".*

3.6.17 Poland (POL)

Sustainable Harvest Indicator (SHI)

Out of 16 fleet segments active in 2015, landings in value have been provided clustered in 11 fleet segments and SHI indicator values were available for 7 fleet segments.

According to the criteria in the 2015 Balance Indicator Guidelines, the SHI indicator values for 5 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that the 2 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 46% of the total value of the landings in 2014 provided by MS. The values of the SHI for these fleet segments indicate:

- 2 fleet segments appear to be not in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance were decreasing for 1 fleet segment, whilst for the other fleet segment no trend was evident.

Stocks at Risk Indicator (SAR)

The SAR indicator was available for 9 of the 11 clustered fleet segments in 2015.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 8 fleet segments appear to be in balance with their fishing opportunities;
- 1 fleet segment appear to be not in balance with their fishing opportunities. The number of SAR stocks identified for these fleet segments were as follows:
    - 1 fleet segment with 3 SAR.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

There are 29 fleet segments in the Polish fleet. After clustering these amount to 7 segments.

The number of fleet segments for which the RoFTA indicator is available for 2015 is 7 and the number of segments for which trends are calculated is 7.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the RoFTA indicator values for the 7 Polish fleet segments indicate that:

- 3 fleet segment appear to be not in balance with its fishing opportunities;
- fleet segment appears to be in balance with its fishing opportunities;

For the 6 segments where data are available 3 show a decreasing and 3 and increasing trend for ROFTA.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the CR/BER indicator is available is 7.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the 7 Polish fleet segments indicate that:

- 3 fleet segments appear to be not in balance with its fishing opportunities;
- 4 fleet segments appear to be in balance with its fishing opportunities.

For 4 fleet segments a decreasing trend is shown, for two an increasing trend and one segment show no trend.

The Inactive Fleet Indicators

In 2016, 5 vessel length segments had inactive vessels (VL0010, VL1012, VL1218, VL1824, VL2440).

The total inactive Polish vessels account for 7.2% of the total number of vessels, 2.67% of the total GT and 4.44% of the total kW.

The fleet segments with the highest levels of inactivity are the VL0010 group at 3.4%, and the VL1012 group at 2.4%.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 7.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the 7 Polish segments indicate that:

- 7 fleet segments appear to be not in balance with their fishing opportunities;
- 0 fleet segment appears to be in balance with their fishing opportunities.

For the 7 segments for which data are available no trend is observed in the Vessel Use Indicator.

Data Issues

In the Annual Economic Report 2017 Poland reports no major data transmission issues. Both Wages and unpaid labour costs are missing for PG 0010 in 2008. Due to

confidentiality reasons, Poland only provides partial data on its distant water fleets. In order to ensure consistency with data provided for previous years, premiums paid by government for scrapped vessels were taken into account when calculating invested capital (not the PIM method).

3.6.18 Portugal (PRT)

Sustainable Harvest Indicator (SHI)

Out of 55 fleet segments active in 2015, landings in value have been provided aggregated in 52 fleet segments and SHI indicator values were available for 49.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 43 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that the 2014 SHI indicator for the 6 fleet segments that may be considered meaningful to assess balance or imbalance, accounted for 16% of the total value of the landings in 2015 provided by MS, and were as follows:

- 5 fleet segments appear to be not in balance with their fishing opportunities;
- 1 fleet segment appear to be in balance with their fishing opportunities.

In the period 2011-2015, the SHI indicator values considered meaningful to assess balance or imbalance were decreasing for 3 fleet segments and with no evident trend for 2 fleet segments and null for 1.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 52 active fleet segments in 2015

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 45 fleet segments appear to be in balance with their fishing opportunities;
- 7 fleet segments appear to be not in balance with their fishing opportunities. The number of SAR stocks identified for these fleet segments were as follows:
    - 6 fleet segments with 1 SAR;
    - 1 fleet segment with 3 SAR.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

There were 55 active fleet segments in the Portuguese fleet in 2015. After clustering these amount to 52 segments.

The number of fleet segments for which the *ROFTA* indicator is available for 2015 is 50. According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the RoFTA indicator values for the Portuguese fleet segments indicate that:

- 1 fleet segment appear to be not in balance with its fishing opportunities, and 3 fleet segments were classified as not sufficiently profitable;
- 46 fleet segments appear to be in balance with their fishing opportunities.

A total of 40 fleet segments showed an increasing trend for *ROFTA*, while a decreasing trend is observed for 10 segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the *CR/BER* indicator is available is 50.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the Portuguese fleet segments indicate that:

- 2 fleet segments appear to be not in balance with their fishing opportunities;
- 48 fleet segments appear to be in balance with their fishing opportunities.

An increasing trend is assessed for *CR/BER* for 44 segments on a total of 46 for which trends are available.

The Inactive Fleet Indicators

Portugal did not properly allocate the number of inactive vessels by supra region in 2016. A differentiation is provided in the fleet segments names, but supra region is not specified. Considering all supra regions, a total of 6 vessel length classes had inactive vessels in 2016 (VL0010, VL1012, VL1218, VL1824, VL2440, VL40XX*)*.

The total inactive Portuguese vessels accounted for 52.25% of the total number of vessels, 23.91% of the total GT and 23.62% of the total kW.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator calculated by using the max days at sea (DAS) provided by the MS is available is 49. The indicator for additional 2 fleet segments is available by using a max DAS of 220. According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the 51 Portuguese segments indicate that:

- 25 fleet segments appear to be not in balance with their fishing opportunities;
- 26 fleet segments appear to be in balance with their fishing opportunities.

For 5 segments an increasing trend is assessed for Vessel Use Indicator, while a decreasing trend is observed for 6 fleet segments. Trend is not available for the other fleet segments.

Data Issues
No major issues were noted in the AER 2017 for Portugal.

3.6.19 Romania (ROU)

Sustainable Harvest Indicator (SHI)

Out of 6 active fleet segments in 2015, the SHI indicator was available for 5.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 3 fleet segments cannot be used meaningfully to assess the balance or

imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for the 2 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 10% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

- 2 fleet segments appear to be not in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance with no evident trend for 1 fleet segment and no conclusion for 1 fleet segment.

Stocks at Risk Indicator (SAR)

SAR indicator was available for all the 6 active fleet segments in 2015

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 5 fleet segments appear to be in balance with their fishing opportunities;
- 1 fleet segment with 1 SAR appears to be not in balance with their fishing opportunities.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

There are 4 fleet segments in the Romanian fleet.

The number of fleet segments for which the ROI indicator is available for 2015 is 4 and the number of segments for which trends are calculated is 4.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the ROI indicator values for the Romanian fleet segments indicate that:

- 0 fleet segment appears to be not in balance with their fishing opportunities;
- 4 fleet segments appear to be in balance with their fishing opportunities.

For 4 segments an increasing trend is assessed for ROI while a decreasing trend is observed for 0 segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the CR/BER indicator is available is 4.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the Romanian fleet segments, indicate that:

- 0 fleet segment appears to be not in balance with their fishing opportunities;
- 4 fleet segments appear to be in balance with their fishing opportunities.

The Inactive Fleet Indicators

In 2016, 5 vessel length segments had inactive vessels (VL0006, VL0612, VL1218, VL1824, VL2440).

The total inactive Romanian vessels account for 17.7% of the total number of vessels, 9% of total GT and for 8.2% of total kW.

The fleet segments with the highest levels of inactivity are the VL0612 group at 14.3% of the total number of vessels and 5% of the total kW, and the VL0006 group at 2.7% of the total number of vessels and 0.08% of the total kW.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 4.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the Romanian segments indicate that:

- 2 fleet segments appear to be not in balance with their fishing opportunities;
- 2 fleet segments appear to be in balance with their fishing opportunities.

For 2 segments an increasing trend is assessed for Vessel Use Indicator while no trend is observed for the other 2 segments.

Data Issues

No major issues were reported.

3.6.20 Slovenia (SVN)

Sustainable Harvest Indicator (SHI)

Out of 13 fleet segments active in 2015, landings in value have been provided aggregated in 4 fleet segments and SHI indicator values were available for all 4.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 3 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for 1 fleet segment for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 11% of the total value of the landings in 2015 provided by MS. The value of the SHI for this fleet segment indicate:

- 1 fleet segment appear to be not in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator value considered meaningful to assess balance or imbalance showed an increasing trend for 1 fleet segment.

Stocks at Risk Indicator (SAR)

SAR indicator was available for all the 4 aggregated active fleet segments in 2015.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes

that the 2015 SAR indicator values indicate:

- 4 fleet segments appear to be in balance with their fishing opportunities.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

There are 13 fleet segments in the Slovenian fleet (some with very few vessels), and after clustering 4 segments remain.

The number of fleet segments for which the ROFTA indicator is available for 2015 is 4 and the number of segments for which trends are calculated is 4.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the RoFTA indicator values for the Slovenian fleet segments indicate that:

- 1 fleet segment appear to be not in balance with their fishing opportunities;
- 3 fleet segments appear to be in balance with their fishing opportunities.

For all the 4 segments, a decreasing trend is observed for RoFTA.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the CR/BER indicator is available is 4.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the Slovenian fleet segments indicate that:

- 1 fleet segment appear to be not in balance with their fishing opportunities;
- 3 fleet segments appear to be in balance with their fishing opportunities.

The Inactive Fleet Indicators

In 2016, 4 vessel length segments had inactive vessels (VL0006, VL0612, VL1218, VL1824). The total inactive Slovenian vessels account for 51.4% of the total number of vessels and for 46.5% of total kW. The fleet segments with the highest levels of inactivity are the VL0006 group at 29.82% of the total number of vessels and 6.3% of the total kW, and the VL0612 group at 19.3% of the total number of vessels and 28.12% of the total kW.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 4.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the Slovenian segments indicate that:

- 3 fleet segments appear to be not in balance with their fishing opportunities;
- 1 fleet segment appears to be in balance with their fishing opportunities.

For 1 segment an increasing trend is assessed for Vessel Use Indicator while no trend is observed for 3 segments.

Data Issues

No major data issues in data transmission and data quality reported by AER2017 for Slovenia.

3.6.21 Spain (ESP)

Sustainable Harvest Indicator (SHI)

Out of 88 active fleet segments in 2015, landings in value have been provided for 87 fleet segments and SHI indicator values were available for 79.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 50 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for the 29 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 53% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

- 20 fleet segments appear to be not in balance with their fishing opportunities;
- 9 fleet segments appear to be in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance were increasing for 4 fleet segments, decreasing for 3 fleet segments, with no evident trend for 16 fleet segments, flat/null for 3 fleet segment and no conclusion for 1 fleet segments.

Stocks at Risk Indicator (SAR)

Out of 88 active fleet segments in 2015, landings in value have been provided for 87 fleet segments and SAR indicator values were available for all 87.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 75 fleet segments appear to be in balance with their fishing opportunities;
- 12 fleet segments appear to be not in balance with their fishing opportunities.

The number of SAR stocks identified for these fleet segments were as follows:

- 5 fleet segments with 1 SAR;
- 5 fleet segments with 2 SAR;
- 1 fleet segment with 3 SAR;
- 1 fleet segment with 5 SAR.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

There are about 89 active fleet segments in the Spanish fleet. After clustering these amount to 59 segments.

The number of fleet segments for which the ROFTA indicator is available for 2015 is 53 (only 26 segments for which ROI is available) and the number of segments for which trends of RoFTA are calculated is 43.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the RoFTA indicator values for the 53 Spanish fleet segments indicate that:

- 8 fleet segments appear to be not in balance with their fishing opportunities;
- 44 fleet segments appear to be in balance with their fishing opportunities;
- 1 fleet segment appears not to be sufficiently profitable.

For 29 segments an increasing trend is assessed for ROFTA while a decreasing trend is observed for 14 segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the CR/BER indicator is available is 53.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the CR/BER indicator values for the 53 Spanish fleet segments indicate that:

- 9 fleet segments appear to be not in balance with their fishing opportunities;
- 44 fleet segments appear to be in balance with their fishing opportunities.

The Inactive Fleet Indicators

In 2016, 6 vessel length segments had inactive vessels (VL0010, VL1012, VL1218, VL1824, VL2440 and VL40XX)

The total inactive Spanish vessels account for 11.68% of the total number of vessels, 5.37% of the total GT and 6.3% of the total kW.

The fleet segments with the highest levels of inactivity are the VL0010 group at 9.83% in number and 1.71% in kW, and the VL2440 group at 0.42% in number and 2.16% in kW.

The Vessel Use Indicator

The number of fleet segments for which the Vessel Use Indicator is available is 59.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the 59 Spanish segments indicate that:

- 11 fleet segments appear to be not in balance with their fishing opportunities;
- 48 fleet segments appear to be in balance with their fishing opportunities.

For 15 segments an increasing trend is assessed for Vessel Use Indicator while a decreasing trend is observed for 4 segments and no trend for 37 segments. Only one-year data is available for 3 fleet segments.

Data Issues

AER 2017 pointed out a significant amount of missing data for essential parts of the data call for most fleet segments and for most of the time period.

3.6.22 Sweden (SWE)

Sustainable Harvest Indicator (SHI)

Out of 29 fleet segments active in 2015, landings in value have been provided aggregated in 28 fleet segments and SHI indicator values were available for 27.

According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 4 fleet segments cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for the 23 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 97% of the total value of the landings in 2015 provided by MS. The values of the SHI for these fleet segments indicate:

- 10 fleet segments appear to be not in balance with their fishing opportunities.
- 13 fleet segments appear to be in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance were increasing for 5 fleet segments, decreasing for 5 fleet segments, with no evident trend for 13 fleet segments.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 28 active fleet segments in 2015.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 24 fleet segments appear to be in balance with their fishing opportunities;
- 4 fleet segments with 1 SAR stock appear to be not in balance.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

In 2015 there were 34 segments in the Swedish fleet of which 3 were active. After clustering, the *ROFTA* indicator was available for 7 segments, of which:

- 4 appeared to be *in balance* with their fishing opportunities,
- 3 appear to be not in balance.

Trends were calculated for 5 segments, of which:

- 4 displayed an *increasing trend*,
- 3 displayed a *declining trend*.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

After clustering the *CR/BER* indicator was available for 7 segments, of which:

- 4 appeared to be *in balance* with their fishing opportunities;
- 3 appear to be not in balance;

Trends were calculated for 7 segments, of which:

- 4 displayed an *increasing trend*,
- 2 displayed a *declining trend*,
- 1 displayed *no trend.*

The Inactive Fleet Indicators

Five vessel length segments (all Area 27) had inactive vessels: VL0010, VL1012, VL1218, VL1824, VL2440. These represented 22.8% of the total number of vessels, 8.9% of the total GT and 12.4% of the total kW. The fleet segment with the highest level of inactivity was the VL0010 group with 19.3% of vessels inactive (1.7% GT, 6.6% kW).

The Vessel Use Indicator

After clustering the vessel utilisation indicator was available for 7 segments, of which:

- 2 appeared to be *in balance* with their fishing opportunities;
- 5 appear to be not in balance, of which 3 are segments 0 – 12 m in length and 2 are segments above 12 metres LOA;

Trends were calculated for 7 segments all of which displayed no trend.

Data Issues

There were no major issues reported in the AER 2017 for Sweden. Mandatory questionnaires have increased survey response three-fold. This year Sweden changed definition for the fleet from including vessels in the fleet by 1 January to include all vessels active during the year. The change has created an increased fleet in 2015 but since the fleet is rapidly decreasing in size the effect is hardly noticeable already in 2016.

3.6.23United Kingdom (GBR)

Sustainable Harvest Indicator (SHI)

Out of 44 active fleet segments in 2015, the SHI indicator was available for 40.
According to the criteria in the 2014 Balance Indicator Guidelines, the SHI indicator values for 21 fleet segments cannot be used meaningfully to assess the balance or

imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

The EWG notes that for the 19 fleet segments for which the 2015 SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 73% of the total value of the landings in 2015 provided by MS. The values of the 2015 SHI indicator for these fleet segments indicate:

- 12 fleet segments appear to be not in balance with their fishing opportunities;
- 7 fleet segments appear to be in balance with their fishing opportunities.

In the period 2011-2015 the SHI indicator values considered meaningful to assess balance or imbalance were increasing for 5 fleet segments, decreasing for 4 fleet segments, with no evident trend for 10 fleet segments.

Stocks at Risk Indicator (SAR)

SAR indicator was available for all the 44 active fleet segments in 2015

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the 2015 SAR indicator values indicate:

- 37 fleet segments appear to be in balance with their fishing opportunities;
- 7 fleet segments appear to be not in balance with their fishing opportunities.

The number of SAR stocks identified for these fleet segments were as follows:

- 4 fleet segments with 1 SAR;
- 1 fleet segment with 3 SAR;
- 1 fleet segment with 4 SAR;
- 1 fleet segment with 5 SAR.

Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)

There were 44 fleet segments in the UK fleet in 2015. After clustering these amount to 29 segments.

The number of fleet segments for which the *ROI* indicator is available for 2015 is 29.
According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the ROI indicator values for the UK fleet segments indicate that:

- 6 fleet segments appear to be not in balance with their fishing opportunities;
- 22 fleet segments appear to be in balance with their fishing opportunities;
- 1 fleet segment appears not to be sufficiently profitable.

17 fleet segments showed an increasing trend for ROI while a decreasing trend is observed for 12 segments.

Ratio between Current Revenue and Break-Even Revenue (CR/BER)

The number of fleet segments for which the *CR/BER* indicator is available is 29.

According to the criteria in the 2014 Balance Indicator Guidelines, EWG 17-08 notes that the CR/BER indicator values for the UK fleet segments indicate that:

- 5 fleet segments appear to be not in balance with their fishing opportunities;
- 24 fleet segments appear to be in balance with their fishing opportunities.

12 fleet segments showed an increasing trend for the CR/BER indicator while a decreasing trend is observed for 11 segments.

The Inactive Fleet Indicators

In 2015, 6 vessel length segments had inactive vessels (*VL0010, VL1012, VL1218, VL1824, VL2440, VL40+))*. The total inactive UK vessels account for 29% of the total number of vessels, 9% of the total GT and 14% of the total kW.

The fleet segments with the highest levels of inactivity are the *VL0010* group at 26% in terms of number of vessels and 9% inactivity in terms of kW.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the Inactive Fleet Indicators values for the UK fleet segments indicate that:

- 1 fleet segment appear to be not in balance with their fishing opportunities;
- 5 fleet segments appear to be in balance with their fishing opportunities.

The Vessel Use Indicator

The Vessel Use Indicator according to the maximum number of sea per segment is not available for the United Kingdom. Hence the theoretical Vessel Use Indicator (VUR220) was used. The number of fleet segments for which the Vessel Use Indicator is available is 29.

According to the criteria in the 2014 Balance Indicator Guidelines EWG 17-08 notes that the VUR indicator values for the UK segments indicate that:

- 18 fleet segments appear to be not in balance with their fishing opportunities;
- 11 fleet segments appear to be in balance with their fishing opportunities.

For 1 segment an increasing trend is assessed for Vessel Use Indicator.

Data Issues

No major issues were detected for the UK in the AER 2017.

3.7 Overview of Balance Indicator Trends

There were no clear signals overall in indicator trends in 2009-2015 for Areas 27 and 37. Improving trends in indicator values were found for the majority of fleet segments for which the economic indicators could be calculated. Analyses of technical indicators showed that indicator trends in 2011-2016 were improving for the inactive vessel indicator, but worsening for the VUR indicator (2011-2015). Improving trends in indicator values were found for the majority of fleet segments for which the SHI could be calculated. EWG 17-08 considered a trend analysis based on SAR indicator values to be too unreliable.

Table 4.7.1 Indicator trends at supra-region level. The percentage of fleet segments with improved, worsened and no trends in Area 27 (Northeast Atlantic), Area 37 (Mediterranean and Black Sea), OFR (Other Fishing Regions) over the period 2011-2016 are shown.

	Trend	Inactive vessels	out of balance	VUR	out of balance	VUR 220	out of balance	SHI >40%	out of balance	CR/BER	out of balance	RoFTA	out of balance	ROI	out of balance
Area 27	increasing	9	2	21	4	11	5	15	13	129	11	151	17	54	9
	decreasing	19	3	21	10	12	6	37	29	38	18	58	25	21	7
	no trend (flat/null)	13	0	115	55	200	131	77	38	42	16	0		0	
	missing trend data	0	0	16	8	6	4	5	5	10	2	10	2	8	2
Area 27 total		**41**	**5**	**173**	**77**	**229**	**146**	**134**	**85**	**219**	**47**	**219**	**44**	**83**	**18**
	% increasing	22%		13%		5%		12%		62%		72%		72%	
	% decreasing	46%		13%		5%		29%		18%		28%		28%	
Area 37	increasing	5	0	22	3	9	6	25	25	80	35	87	32	10	3
	decreasing	16	2	11	5	5	5	24	23	38	21	46	24	2	1
	no trend	13	0	70	38	111	95	17	14	15	7	0	0	0	0
	missing trend data	1	0	**23**	**10**	**7**	**7**	**7**	**4**	**10**	**4**	**10**	**3**	**6**	**0**
Area 37 total		**35**	**2**	**126**	**56**	**132**	**113**	**73**	**66**	**143**	**67**	**143**	**59**	**18**	**4**
	% increasing	15%		21%		7%		38%		60%		65%		83%	
	% decreasing	47%		11%		4%		36%		29%		35%		17%	
OFR	increasing	1	0	13	3	6	3	1	0	12	2	11	2	1	0
	decreasing	0	0	1	1	5	0	2	2	6	5	8	5	1	1
	no trend	3	0	16	9	23	15	**9**	**4**	**1**	**0**	**0**	**0**	**0**	**0**
	missing 2015 data			7	3	**6**	**4**	2	1	3	2	3	2	3	1
OFR total		**4**	**0**	**37**	**16**	**40**	**22**	**14**	**7**	**22**	**9**	**22**	**9**	**5**	**2**
	% increasing	25%		43%		18%		8%		63%		58%		50%	
	% decreasing	0%		3%		15%		17%		32%		42%		50%	
NONE	increasing	1	1												
	decreasing	3	0												
	no trend	7	0												
	missing 2015 data	16	1												
NONE total		**27**	**2**												
	% increasing	9%													
	% decreasing	27%													
TOTAL		**107**	**9**	**336**	**149**	**401**	**281**	**221**	**158**	**384**	**123**	**384**	**112**	**106**	**24**
	% increasing	18%		19%		7%		20%		61%		69%		73%	
	% decreasing	42%		11%		6%		30%		23%		31%		27%	

Note: Totals include fleet segments with no trend value (i.e. insufficient time series for trend calculation) but have a indicator value for 2015 (or 2016 for some technical indicators)
% increasing and % decreasing trends include only fleet segments with a calculated trend in 2015 (or if the case, 2016)

When only considering the trends for Member State fleet segments assessed as being out of balance in 2015 according to the criteria of the 2014 Balance Indicator Guidelines (see Table 4.7.2 for assessments of trends in individual countries), the majority of fleet

segments which were out of balance according to the biological indicator (SHI) showed improving trends. There were no clear trends for the technical and economic indicators.

Table 4.7.2 Out of balance trend summary table (MS). Percentage of fleet segments with assessments of 'balance' of each MS which were out of balance in 2015 (or 2016 for inactive vessels), and for which trends improved (green font), worsened (red font) or were neutral (black font) over the period 2010-2014.

MS	Biological indicator					Technical indicators										Economic indicators											
	SHI					**% of inactive vessels N**					**VUR**					**CR/BER**					**RoFTA**				**ROI**			
	No. FS*	% of fleet segments out of balance	Incr. trend	Decr. trend	None	No. FS*	% of fleet segments out of balance	Incr. trend	Decr. trend	None	No. FS*	% of fleet segments out of balance	Incr. trend	Decr. trend	None	No. FS*	% of fleet segments out of balance	Incr. trend	Decr. trend	None	No. FS*	% of fleet segments out of balance	Incr. trend	Decr. trend	No. FS*	% of fleet segments out of balance	Incr. trend	Decr. trend
BEL	3	100		3		1	0				4	0				4	50			2	4	50	1	1	0			
BGR	16	100	9	6	1	4	25		1		0					16	56	5	4		16	44	3	4	0			
CYP	0					3	0				0					6	100	5		1	6	100	6		0			
DEU	9	100		5	4	5	20	1			13	23			3	13	54	1	2	4	13	54	3	4	0			
DNK	15	80		7	5	0					0					19	32	2	1	3	19	32	4	2	19	37		2
ESP	27	70	4	2	13	6	0				56	20	1	2	8	43	21	1	8		43	19	1	7	13	15		2
EST	5	40			2	1	0				2	0				4	0				4	0			4	0		
FIN	4	25			1	3	33		1		5	60	1		2	5	80		1	3	5	80	1	3	0			
FRA	23	52	3	5	4	14	0				57	58	5	4	24	45	16	2	2	3	45	13	4	2	0			
GBR	19	63	5	2	5	6	17	1			0					29	17	1	3	1	29	17	2	3	29	21	2	4
GRC																												
HRV	10	100	5	5		5	0				21	52		1	10	21	62	13			21	43	9		0			
IRL	13	46	2	2	2	5	20		1		17	59	1	3	6	11	55	4	1	1	11	55	3	3	0			
ITA	16	94	4	6	5	5	0				21	76		2	14	21	19		2	2	21	14		3	0			
LTU	2	100			2	6	17		1		2	50		1		5	40		2		5	40		2	0			
LVA	1	0				1	100	1			3	67			2	3	0				3	0			0			
MLT	5	80	1	1	2	5	0				19	0				19	63	8	3	1	19	63	9	3	8	50	3	1
NLD	8	100		5	3	6	0				14	29			4	13	15	2			13	15	2		12	17	2	
POL	2	100		1	1	5	0				6	100			6	6	33		2		6	33		2	0			
PRT	5	80		3	1	0					35	51	1	3	14	50	4		2		50	2		1	0			
ROU	1	100	1			2	0				4	50	1		1	4	0				4	0			4	0		
SVN	1	100	1			4	25		1		4	75			3	4	25		1		4	25		1	0			
SWE	22	41	3	1	5	3	0				7	71			5	7	43		2	1	7	43		3	0			

* No FS refers to the number of fleet segments or aggregated fleet segments for which a valid assessment of 'balance' for the reference year and trend analysis were available. This figure will not correspond to the total number of fleet segments (or aggregated fleet segments) for a MS if an assessment was not available for one or more fleet segments for the reference year and if the trend analysis was not possible, i.e. if one of the two most recent years of data are missing.

The percentage of fleet segments out of balance was calculated against the *No. FS, i.e. the number of fleet segments or aggregated fleet segments for which both an assessment of balance and a trend were available.

4 TOR 2 – ASSESSMENT OF MEMBER STATE ACTION PLANS

4.1 Introductory Remarks for TOR 2

Article 22 of Regulation 1380/2013 (on the Common Fisheries Policy) states that where fleet segment assessments clearly demonstrate that fishing capacity is not effectively balanced with fishing opportunities, a Member State should prepare and include in its report an action plan for the fleet segment(s) identified as having structural overcapacity. According to Article 22 of Regulation 1380/2013, action plans should set out the adjustment targets and tools to achieve a balance, and a clear timeframe for its implementation. This Regulation is further supported by COM (2014) 545 Final, which states that action plans should also specify the causes of imbalance and in particular if it has a biological, economic or technical background as calculated according to the indicators.

The evaluation of action plans conducted by EWG 17-08 was based on the protocol described in the STECF 15-02 report. In line with the meeting Terms of Reference, experts considered the following when reviewing the action plans:

i. Indicators and fleet segments considered;
ii. Adjustment targets specified;
iii. Specification of tools to reach the adjustment targets;
iv. Specification of a clear implementation timeframe.

Expert judgements are based on comparing the submitted Member State action plans with the requirements of the 2014 Balance Indicator Guidelines (COM (2014) 545 Final). Such an approach in no way implies that the Expert group agrees with the criteria prescribed in the guidelines for determining whether a fleet segment is out of balance with its fishing opportunities.

4.2 Assessment of Member State Action Plans

Of the 23 Member States submitting fleet reports for 2016, there were 13 accompanying action plans.

Three (Bulgaria, Croatia and Romania) Member States made amendments to the previous year's action plan and ten (France, Germany, Greece, Italy, Malta, Poland, Portugal, Slovenia, Spain and the UK) provided new action plans.

4.2.1 Belgium (BEL)

An addendum to the 2015 fleet report for Belgium was produced in December 2016. It contained an action plan to comply with an ex-ante conditionality for the Belgian EMFF Operational Programme.

EWG 17-08 notes that in the 2016 fleet report for Belgium, the Member State determined that no fleet segments were imbalanced and proposed no action plan.

4.2.2 Bulgaria (BGR)

EWG 17-08 notes that no new or revised action plan is presented for the Bulgarian fleet and no additional fleet segments have been identified for action. However, the Bulgarian fleet report describes the adaption of the measures in the Bulgarian Action plan for 2015 for the fleet segments where structural excess capacity is identified. A review of these measures is already provided in EWG 16-09.

4.2.3 Croatia (HRV)

Indicators and Fleet Segments Considered

Croatia presented an updated action plan with its fleet report for 2016. The updates consist of adjusted targets for some segments based on the progress achieved in 2016. The permanent cessation measure in 2015 and 2016 resulted in a decrease of capacity in the PS and DTS (using demersal trawls, OTB) fleets.

The Croatian authorities used the state of stocks (SHI) for dependent fleets and in some cases technical and economic indicators to identify that the following fleet segments are not in balance with their fishing opportunities:

- DTS VL0612: vessels with an overall length of 6 m to 12 m fishing with demersal trawlers and/or demersal seiners
- DTS VL1218: vessels with an overall length of 12 m to 18 m fishing with demersal trawlers and/or demersal seiners
- DTS VL1824: vessels with an overall length of 18 m to 24 m fishing with demersal trawlers and/or demersal seiners
- DTS VL2440: vessels with an overall length of 24 m to 40 m fishing with demersal trawlers and/or demersal seiners
- PS VL0612: vessels with an overall length of 6 m to 12 m fishing with purse seine
- PS VL1218: vessels with an overall length of 12 m to 18 m fishing with purse seine
- PS VL1824: vessels with an overall length of 18 m to 24 m fishing with purse seine
- PS VL2440: vessels with an overall length of 24 m to 40 m fishing with purse seine
- DFN VL 1218 vessels with an overall length of 12 m to 18 m fishing with drift and/or fixed netters

All of the above fleet segments operate in the Adriatic Sea.

Adjustment tools and targets

Croatia plans to implement additional effort limitations for vessels targeting anchovy and to introduce complementary spatial and temporal closures. Capacity reduction measures to be implemented at a national level under national management plans (implemented by the EFF OP and EMFF OP) and applied to the purse seine fleet are in line with effort measures proposed in the multi-annual plan as follows:

-Maximum of 144 days targeting anchovy and 144 days per vessel targeting sardine;

-Closures for vessels over 12 m length overall for not less than 6 months which shall cover at least 30 percent of the area which has been identified as a nursery area or as an important area for the protection of early age classes of fish (in territorial and inner sea);

-Limitation of overall fleet capacity of purse seiners actively fishing for small pelagic stocks in terms of gross tonnage (GT) and/or gross registered tonnage (GRT), engine power (kW) and number of vessels, as recorded both in national and GFCM registers in 2014;

-Catch limit in 2017 and 2018 has been set at the level of total catch of small pelagics (sardine and anchovy) in 2014;

-Spatial and temporal closure of no less than 15 continuous days and up to 30 continuous days taking place between 1 April and 31 August;

Croatia considers that purse seiners and bottom trawls should be given the most attention in terms of capacity and effort reduction. In the PS segment, the intention to achieve balance in relation to the availability of small pelagic resources is further supported by measures within the GFCM management plan for the GSA 17, as well as through the national management plan pursuant to the Mediterranean Regulation.

The capacity management tools proposed in the Croatian action plan submitted with their Annual fleet report for 2016 is presented in Table 5.2.3.1.

Table 5.2.3.1 Tools and fleet segemnts presented in the Croatian action plan submitted with the Annual fleet report for 2016

Tools	Fleet segments
Tool 1:Introducing of no-take zone and areas under special management regime;	PS, DTS
Tool 2: Capacity reduction measures by permanent cessation of fishing activities and reassignment funded through the European Maritime and Fisheries Fund (EMFF).	PS, DTS
Tool 3: Effort management measures by temporary cessation of fishing activities (through EMFF) and additional temporal and spatial restrictions and limiting the number of days at sea.	PS, DTS
Tool 4: Additional restrictions for fleet over 12m.	PS
Tool 5:Capacity reduction measures to be implemented on national level under national management plans (implemented by the EFF OP and EMFF OP) and applied to the purse seine fleet are considered to be complementary to effort measures foreseen through the GFCM plan.	PS
Tool 6: Limiting the length of gillnets.	DFN
Tool 7: Spatial and temporal closures for trammel nets.	DFN
Tool 8: Technical measures to decrease effort and increase selectivity	DFN

Timeframes for Implementation

The timeframe for implementation of the Croatian action plan is clearly specified and indicates that the intended reductions are expected to be achieved by the end of 2017.

Conclusion

The fleet segments, tools targets and timeframe for implementation of the measures proposed in the Croatian action plan submitted with their Annual fleet report for 2016 is summarised in Table 5.2.3.2.

Table 5.2.3.2 Fleet segments, tools targets and timeframe for implementation of the measures proposed in the Croatian action plan submitted with their Annual fleet report for 2016

Fleet name	Area	Tools	Targets	Timeframe
DTS VL0612	Adriatic Sea	see Table 5.2.3.1	Specified	the end of 2017
DTS VL1218	Adriatic Sea	see Table 5.2.3.1	Specified	the end of 2017
DTS VL1824	Adriatic Sea	see Table 5.2.3.1	Specified	the end of 2017
DTS VL2440	Adriatic Sea	see Table 5.2.3.1	Specified	the end of 2017
PS VL0612	Adriatic Sea	see Table 5.2.3.1	Specified	the end of 2017
PS VL1218	Adriatic Sea	see Table 5.2.3.1	Specified	the end of 2017
PS VL1824	Adriatic Sea	see Table 5.2.3.1	Specified	the end of 2017
PS VL2440	Adriatic Sea	see Table 5.2.3.1	Specified	the end of 2017
*DFN VL 1218	Adriatic Sea	see Table 5.2.3.1	None specified	2017-2018

*Although the DFN fleet is not considered by Croatia to be out of balance, the report lists measures that have been implemented in 2016 and 2017 as the effects of a combination of measures are expected over the next years.

4.2.4 Cyprus (CYP)

The Cyprus fleet report for 2016 does not contain a new action plan.

An action plan for the small-scale inshore fleet (0-12m with category license A&B) was implemented by Cyprus during 2015 and completed early 2016. Since 2011 Cyprus has also been implementing the 'Management Plan for the Bottom Trawl Fishery Within the Territorial Waters of Cyprus'. The plan restricts the number and activity of the bottom trawlers operating in territorial waters.

In its 2015 action plan Cyprus considered that the most suitable measure for achieving a balance between the fleet and its fishing opportunities is the closing of areas of biological importance for the stocks exploited by the fleet segment and has proposed several measures.

The fleet report for 2016 mentions an updated time-frame with the "Consultation with stakeholders during 2016-2017 for introducing a whole year area closure for trawling in the northwest of Cyprus" postponed for one year to 2017-2018.

The timeframes for implementation of the other measures remain unchanged.

4.2.5 Denmark (DNK)

EWG 17-08 notes that in its fleet report for 2016, no fleet segments were identified by the Member State as being out of balance with available fishing opportunities and no action plan was provided.

4.2.6 Estonia (EST)

EWG 17-08 notes that no fleet segments were identified by the Member State as being out of balance with available fishing opportunities and no action plan was provided.

The Estonian fleet report states that entry/exit scheme is fully applied and the fleet ceiling set for the Estonian fishing fleet has not been exceeded.

4.2.7 Finland (FIN)

EWG 17-08 notes that no fleet segments were identified by the Member State as being out of balance with available fishing opportunities and no action plan was provided.

4.2.8 France (FRA)

Indicators and Fleet Segments Considered

The French fleet segmentation in the fleet report for 2016 is slightly different to that presented for 2015 with some additional fleet segments. Using the classification criteria proposed in the fleet report for 2016, 232 fleet segments were classified as follows:

- 103 were considered balanced,
- 10 showed enduring imbalance,
- 30 are to be monitored,
- 18 are inactive and
- 71 where the status is subjected to additional data collection.

According to the French Authorities, only those ten fleet segments classified with enduring imbalance are identified as having structural overcapacity and are included in the action plan.

The enduring imbalance is determined by unsatisfactory values from the SHI or SAR indicator in 2013-2015. The SHI indicator is recorded only if the landings relating to the stock under consideration account for at least 40 % of the segment's landings. France uses two additional indicators to assessed enduring imbalance: Number of Overexploited Stocks (NOS) and Economic Dependence Indicator (EDI), where fleet segments are classified as imbalanced if they present unsatisfactory indicators over the period 2013-2105.

EWG 17-08 notes that the number of fishing stocks considered for the biologic indicators assessment for the fleet report for 2016 continues to increase, now totalling 133 stocks,

representing 71% of total landings. For the SHI calculations 62 stocks were used. The increase of fishing stocks increases the reliability of the biologic indicators calculation.

As for 2015, EWG 17-08 notes that despite the French Authorities calculating the technical and economic indicators calculation, they do not take them into account to assess balance.

Only biological indicators were used to determine which segments are out of balance. The segments indicated in the action plan are in accordance with these identified in the fleet report and presented in Table 5.2.8.1.

Table 5.2.8.1 Imbalanced fleet segments

Fleet name	**Area**
DFN VL1218	Bay of Biscay **(BB)**
DFN VL1824	
DFN VL1012	Atlantic North Sea **(NSEC)**
Eel bycatch VL0024	Atlantic **(AT)**
DTS VL0612	Mediterranean Sea **(MED)**
DTS VL1218	
DTS VL1824	
DTS VL2440	
DFN VL0612	
MGO VL0612*	

* Only for vessels using the *gangui* method are identified as having an enduring imbalance.

Adjustment Targets and Tools

The French Authorities propose the tools to achieve balance summarised in table 5.2.8.2.

Table 5.2.8.2 – Tools applied in the action plan

Tools	**Fleet**
Permanent cessation by scrapping **(PC)**	all
Ban of new vessels **(BA)**	all
Limiting capacity and Effort **(LE)**	(BB, NSEC and MED_DTS)
Temporary cessation **(TC)**	(BB, NSEC)
Fleet conversion* **(FC)**	(BB, NSEC and MED_gangui)

* In order to improve greater selectivity for fishing gear.

The action plan also proposes to maintain the authorization system in the Mediterranean fleet segments with several limitations to vessel capacity, vessel and license transactions and vessel modifications. Finally, the action plan also proposes consultation with the National Committee for Maritime Fisheries and Fish Farming to explore capacity management measures for the Bay of Biscay fleet.

The action plan only establishes capacity adjustment targets (number of vessels, GT and kW) in relation to decommissioning. These are summarised in Table 5.2.8.3:

Timeframes for Implementation

The action plan sets out a timescale for the permanent cessation of fishing activities with public aid until the end of 2017. Any remaining decommissioning is intended to be complete by the end of 2020.

Table 5.2.8.3. Capacity adjustment targets through decommissioning.

			Fleet	Proposed reduction		
Area	**Gear**	**Length**	**Number**	**Number**	**GT**	**kW**
Bay of Biscay	DFN	VL1218	38	3-4	150	730
		VL1824	24	2-3	260	760
North Sea East Coast	DFN	VL1012	68	10	104	1606
Atlantic - Eel		VL0024	507	40-50	220	3250
Mediterranean Sea	DTS	VL0612	1	1	10	100
		VL1218	4	2	20	400
		VL1824	27	1	50	240
		vl2440	31	2	230	620
	DFN	VL0612	9	5		
	MG0	VL0612	14			
Total			723	66-78	1044	7706

Conclusion

The French criterion for classifying imbalanced fleet segments is only based on biological indicators and an estimation of enduring imbalance. In addition to the SHI and SAR indicators, the Member State used two additional criteria: Economic Dependency Indicator (EDI) and Number of Overexploited Stocks (NOS).

The ten fleet segments classified as having enduring imbalance were identified and specific tools were tailored for each segment. Targets and associated timeframes for the permanent removal of vessels from the fleet are stated in the action plan.
The fleet segments, tools targets and timeframe for implementation of the measures proposed in the French action plan submitted with their Annual fleet report for 2016 is summarised in Table 5.2.8.4.

Table 5.2.8.4. Summary of the French action plan

Fleet name	**Area**	**Tools***	**Targets (n. Vessels)**	**Time frame**
DFN VL1218	BB	PC BA LE TC FC	3-4	2017 (public aid) and end 2020 (remain)
DFN VL1824		PC BA LE TC FC	2-3	
DFN VL1012	NSEC	PC BA LE TC FC	10	
Eel bycatch VL0024	AT	PC BA	40-50	
DTS VL0612	MED	PC BA LE	1	
DTS VL1218		PC BA LE	2	
DTS VL1824		PC BA	1	
DTS VL2440		PC BA	2	
DFN VL0612		PC BA	5	
MGO VL0612		PC BA FC		

*** PC** – permanent cessation of fishing activities **TC** – temporary cessation of fishing activities

LE – limiting effort **BA** – ban of new vessels

FC – fleet conversion

4.2.9 *Germany (DEU)*

Indicators and Fleet Segments Considered

Biological, economic and technical capacity indicators were analysed in the fleet report for 2016.

An action plan was submitting for those segments where some or all of these indicators identified imbalance.

The German action plan relates to the following segments:

- PG VL0010: Catching Baltic sea stocks
- PG VL1012: Catching cod and herring in the western Baltic Sea
- DTS VL1012: Catching cod, herring and dab in the Baltic Sea
- DTS VL1218: Catching Baltic Sea and Kattegat stocks
- DTS VL1824: Catching Baltic Sea and North Sea stocks

Adjustment Targets and Tools

The German action plan presents targets and tools for the 5 fleets identified. The plan includes some overall tools that target all fleets and some tools that is specifically targeted towards an individual segment.

The general tools include:

- Transposition of the legal requirements of the new Common Fisheries Policy to promote a positive investment climate within the fishing industry;
- Indicator adjustments to improve the accuracy of measures to adjust fishing capacity to fishing opportunities;
- Modernisation of the German fishing fleet, including:
  a) Conversion to improve selectivity, energy efficiency and product quality,
  b) Modernisation of on-board processing and storage to improve product quality,
  c) More selective or energy-efficient gear,
  d) Measures to improve the cost-effectiveness of fishing vessels and safety at work on board.
- Actively shifting fishing pressure to maintain small-scale fisheries in the Baltic Sea
- Temporary and permanent cessation of fishing activities

Targets for these general measures are given, but the target is not related to the expected effects of these tools, e.g. scale of capacity reduction or increased economic performance.

The action plan also includes tools and timeframes for each individual segment as set out in Table 5.2.9.1 below. However, no targets are given in relation to these specific fleet segment tools.

Timeframes for Implementation:

The time frames for the implementation of the tools to address the imbalanced fleet are well described and stated in table 5.2.9.1.

Conclusion

The German action plan identifies five imbalanced fleet segments and presents general measures and measures specific to those fleet segments. Tools and timeframes are defined in relation to these measures, however targets are not presented. Targets for

the general measures are given, but the target is not related to the expected effects of these tools.

The fleet segments, tools targets and timeframe for implementation of the measures proposed in the German action plan submitted with their Annual fleet report for 2016 is summarised in Table 5.2.9.1.

Table 5.2.9.1. Summary of the German action plan

Fleet name	Area	Tools*	targets	Timeframe (end)
PG VL0010	Baltic Sea	SRQ, MSC, MS, AR, TC, PC, ET	No targets	SRQ=ongoing; MSC=2015; MS=ongoing; AR=ongoing; TC=2020; PC=2018; ET=2020
PG VL1012	Baltic Sea	SRQ, MSC, MS, AR, TC, ET	No targets	SRQ=ongoing; MSC=2017; MS=ongoing; AR=ongoing; TC=2020; ET=2020
DTS VL1012	Baltic Sea	SRQ, MSC, MS, AR, TC, PC, ET	No targets	SRQ=ongoing; MSC=2017; MS=ongoing; AR=ongoing; TC=2020; PC=2018; ET=2020
DTS VL1218	Baltic Sea / Kattegat	SRQ, MSC, MS, AR, TC, PC, ET	No targets	SRQ=ongoing; MSC=2017; MS=ongoing; AR=ongoing; TC=2020; PC=2018; ET=2020
DTS VL1824	Baltic Sea / North sea	SRQ, MSC, MS, AR, TC, ET	No targets	SRQ=ongoing; MSC=2015; MS=ongoing; AR=ongoing; TC=2020; ET=2020

*SRQ= Measures to shift relevant quotas; MSC=MSC certification; MS=Marketing Support; AR=Aid Restrictions; TC=Temporary cessation of fishing activities; PC=Permanent cessation of fishing activities, ET=Evaluation of tools.

4.2.10 Greece (GRC)

In the fleet report for 2016 an overview of fleet characteristics is presented for the purse seine fleet, the bottom trawler fleet and the costal fleet using passive gears.

An action plan for the costal fleet segment is presented.

Indicators and Fleet Segments Considered

Due to different segmentation levels throughout the fleet report and plan, it is not possible to compare the different indicators for the three presented fleets:

- Technical indicators for three fleets by length class
- Biological indicators only F/Fmsy ratio presented for main species on the level of three segments
- Economic indicators based on the DCF segmentation

Although the fleet report for 2016 divides the Greek fleet into three broad segments, for some indicators the segmentation is presented at a more specific level. The costal fleet is considered in relation to vessels targeting various fish stocks and the fishing gear used, consisting of:

- nets of various kinds (set gillnets (GNS), trammel nets (GTR), combined gillnets/trammel nets (GTN)
- pots (FPO) and
- hooks and lines of various kinds (such as drifting longlines (LLD), set longlines (LLS), hand lines and pole lines (LHP), troll lines (LTL), etc.

The action plan presents and analysis of the coastal fleet, concluding that adjustment is necessary in order to improve the status of the hake stock.

Adjustment Targets and Tools

To progressively restore hake stocks to biomass levels allowing a maximum sustainable yield at the latest by 2020, the action plan proposes a reduction of fishing capacity, mainly by scrapping a number of coastal vessels that target this specific species, among others, using nets and longline as fishing gear.

The Greek action plan provides targets for fleet reduction through permanent cessation and it sets the target to reduce the number of vessels in the costal fleet by up to 10%. This should also be reflected in GT reduction in range from 1,000 GT to 3,000 GT and in kW reduction from 7,000 kW up to 21,000 kW.
The action plan also proposes the implementation of temporal cessation following this permanent cessation and when overcapacity is re-evaluated in 2017, but no further targets are set.

Timeframes for Implementation

It is foreseen that permanent cessation will be conducted until the end of 2017, while temporal cessation will be conducted following the assessment in the fleet report for 2017.

Conclusion

The Greek action plan has the objective of reducing the overall fishing capacity of professional fishing vessels (with engine) using various types of coastal fishing gears. According to the action plan, this reduction should help to improve stock status of hake which is mostly exploited by coastal fleet. This is to be done primarily through permanent cessation and afterwards through temporary cessation. Targets are set in relation to numbers of coastal vessels with estimates of associated GT and kW reduction. The action plan does not define these in relation to the more specific fleet segments i.e. defining gears and length (Table 5.2.10.1).

Table 5.2.10.1. Overview of tools, targets and timeframe for the imbalanced fleet segments

Fleet name	**Tools**	**Targets**	**Timeframe**
Coastal fleet	Permanent cessation	Reduction up to 10% in number of vessels	By the end of 2017
	Temporal cessation	Non specified	Non specified

4.2.11 Ireland (IRL)

Indicators and Fleet Segments Considered

The fleet report for 2016 for Ireland does not contain a new action plan. A long-term action plan was set out in 2014.

The 2015 fleet report for Ireland indicated that there may be an economic imbalance within the demersal trawl and seiner (polyvalent general) fleet segment. However, the results in the 2016 fleet report for the economic indicators show a generally improving outlook for the Irish fleet.

Adjustment Targets and Tools

According to the information provided in the Irish fleet report for 2016, the implemented measures and the decommissioning schemes in 2005/2006 and 2008 have played a significant part in addressing the balance between capacity and opportunity.

The previous Action Plans submitted with the Annual Fleet Reports for 2014 and 2015 provided for an adjustment of the polyvalent fleet (12 to 24m) through schemes to increase sales prices, on-board added value schemes and a targeted decommissioning scheme.

Timeframes for Implementation

The action plan for 2014 continues to take place in 2016 and 2017. The support schemes are scheduled to conclude on 31 December 2017.

Conclusion

The results indicate that there is no longer an economic imbalance in the polyvalent fleet (12 to 24m) and the decommissioning scheme is no longer deemed necessary. However, Ireland is continuing to implement the Action Plan as previously submitted (with the exception of decommissioning) in order to further improve the economic viability of the fleet.

4.2.12 Italy (ITA)

Italy presented an action plan together with its fleet report for 2016.

Indicators and Fleet Segments Considered

Italy calculated the following biological, economic and technical indicators to define imbalance in fleet segments:

- Biological indicators: i) SHI (SAR was not calculated 'owing to the lack of reference points based on biomass for most of the stocks fished by the Italian fleet'.
- Economic indicators: i) ROFTA and ii) CR/BER.
- Technical sustainability indicators: i) IVI and ii) UTR

These 3 groups of indicators were calculated for 2015, by fishing method, length category, and GSA.

Italy has defined a methodology to determine imbalance in segments. In order to identify fleet overcapacity, the Member State focuses on the SHI and considers that a fleet has imbalance when the SHI is >1.0 for at least two years out of three over 2013-

2015. Once Italy has identified imbalance in the fleet considering SHI, the associated economic indicators are looked at by the MS.

Thirty-four fleets have an SHI >1 and 13 of them also show a negative ROFTA and are therefore considered as having imbalance (Table 5.2.12.1).

Table 5.2.12.1 Imbalanced Italian Fleet Segments in the fleet report for 2016*

Fleet segment	Area
DTS VL 1218	10
DTS VL 1824	10/16/17/19
DTS VL 2440	11/17
HOK VL 1218	10
HOK VL 1824	19
PS VL 2440	17/18
TBB VL 2440	17
TM VL 2440	17

*in relation to SHI and RoFTA in 2015

Adjustment Targets and Tools

The action plan specifies GT reduction targets of between 8 and 9% for the imbalanced fleet segments fishing using purse seine/trawling in GSAs 17/18 and bottom trawl/*rapido.* Permanent cessation is the primary tool to achieve this.

Targets are not set in relation to two fleet segments (HOK VL 1218 in GSA 10 and HOK VL 1824 in GSA 19).

In addition to permanent cessation, Italy has proposed the following tools for addressing imbalance in segments:

- Reduction of fleet activity;
- Space and time-related fishing restrictions; and
- Permitting schemes for certain fisheries.

There are specific legislative provisions to limit vessels permitted to fish in the long-finned tuna (*Thunnus alalunga*) fishery and the swordfish (*Xiphias gladius*) fishery. This tool may be intended to address the imbalance identified in the HOK segments in GSA 10 and 19, but this is not explicitly stated in the Action Plan and targets are not specified for these fleet segments.

The Italian authorities also propose that studies be undertaken, in particular in relation to selectivity of towed gears, to inform the revision and update national management plans.

Timeframes for Implementation

The GT reduction through permanent cessation is expected to be achieved from 2017 with the vessels scrapped by the end of 2018.

The timeframe for implementing additional measures in the PS and TM fleet segments is defined by the multi-annual plan for small pelagics in the Northern Adriatic with the current plan revision defining measures on an annual basis.

Conclusion

The imbalanced fleet segments, tools, targets and timeframe for implementation of the measures proposed in the Italian action plan submitted with their Annual fleet report for 2016 is summarised in Table 5.2.12.2.

Table 5.2.12.2. Sumary of the Italian action plan

Fleet name	Area (GSA)	Tools*	Targets	Timeframe
DTS VL 1218	10	PC	8% GT reduction	End 2018
DTS VL 1824	10/16/17/19	PC	8% GT reduction	End 2018
DTS VL 2440	11/17	PC	8% GT reduction	End 2018
HOK VL 1218	10	LC	None specified	None specified
HOK VL 1824	19	LC	None specified	None specified
TBB VL 2440	17	PC	8% GT reduction	End 2018
PS VL 2440	17/18	PC	8% GT reduction	End 2018
		DaS, TC	None specified	Annual**
TM VL 2440	17	PC	8% GT reduction	End 2018
		DaS, TC	None specified	Annual**

* PC = Permanent cessation, DaS = Days at Sea, TC = temporary cessation of fishing activities, LC = License cap

** the current multi-annual plan for small pelagics defines measures and targets for 2017

4.2.13 Latvia (LVA)

EWG 17-08 notes that no fleet segments were identified by the Member State as being out of balance with available fishing opportunities and no action plan was provided.

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

4.2.14 Lithuania (LTU)

EWG 17-08 notes that in its fleet report for 2016, no fleet segments were identified by the Member State as being out of balance with available fishing opportunities and no action plan was provided.

4.2.15 Malta (MLT)

Maltese authorities provide a new action plan after taking into consideration the trend analysis of the economic performance of their fishing fleet and the trend analysis of the two economic indicators for the years 2008-2015.

Indicators and Fleet Segments Considered

In the fleet report for 2016, four balance indicators were applied:

- Inactive fleet indicator (for the reference year 2016);
- Vessel utilisation technical indicator (for the reference year 2016);
- Return on investment economic indicator (for the reference year 2015);

- Break-even revenue economic indicator (for the reference year 2015).

Because of the unavailability of the sustainable harvest indicator, the MS has referred to stock assessments carried out by ICCAT, STECF and GFCM. According to the information provided for the other biological indicator (Stock at Risk) in the period 2012-2014, the Maltese fishing fleet did not exploit any stocks at high biological risk. Due to the absence of reliable biological data, the 2016 Maltese Action plan considers the only meaningful indicator for its fleets to be the Return on Investment (ROI) and Current Revenue vs. Break Even Revenue (BER).

EWG 17-08 notes that the action plan includes an in-depth analysis of trends in economic indicators in order to get a meaningful picture of the fleet.

The plan considers that four of the segments show deterioration in the economic performance:

- Fixed Netters (DFN) VL0612;
- Polyvalent Passive Gears Only (PGP) VL0612;
- Purse Seiners (PS) VL0612;
- Purse Seiners (PS) VL1824.

Three of them (the one DFN and the two PS fleet segments) only consist of 1 vessel and so the Maltese Authorities do not deem the economic indicators are representative of the fleet and thus, not suitable to indicate the status of the fleet and relevant stocks. This is the reason that those fleet segments are not in the 2016 Action Plan.

According to the current report, the only segment which shows a negative trend and is considered as imbalanced is the PGP segment.

Adjustment Targets and Tools

The tools proposed in the new action plan are several types (Table 5.2.15.1):

- Monitoring of landings through weighing of fishery products on the automatic weighing and labelling machines in order to guarantee that all catches will be recorded;
- Monitoring of activity through an implementation of a sampling plan in order to monitor all landings of vessels below 10m;
- Conservation through introducing a prohibition of fishing in bays and creeks from 15 February to 30 August with all types of nets and closed season for the months of April and May. The main aim of this tool is increase in biomass by 2020;
- Interventions on the market to improve the returns of the sector, potentially including promotion of the fishery products or to incentives for the better organization of the sector to access more profitable markets.

Management measures under the Mediterranean Regulation, General Fisheries Commission for the Mediterranean (GFCM) and International Commission for the Conservation of Atlantic Tuna (ICCAT) are also mentioned in the action plan, and are said to contribute to achieving sustainable exploitation of stocks.

Table 5.2.15.1. Overview of tools, targets and timeframe for the imbalanced fleet segments

Fleet name	Area	Tools	Targets	Timeframe
All vessels <12m	Mediterranean	Weighing of fishery products on the Automatic weighing and Labeling machines	All catches recorded	2017-2020
All vessels <10m	Mediterranean	Sampling plan	All landings of vessels <10m monitored through sampling and sales notes	2017-2020
DFN	Mediterranean	Prohibition of fishing in bays and creeks from 15 February to 30 August with all types of nets.	Increase in biomass by 2020	2017-2020
FPO	Mediterranean	Closed season for the months of April and May	Increase in biomass by 2020	2017-2020
Entire fleet	Mediterranean	Analysis of the market to identify any structural deficiencies or market forces resulting in a low average price at first sale for fishery products	Identification of measures to achieve better prices at first sale to help generate more income for the fishermen	From 2016 onwards

Timeframes for Implementation

The timeframe for implementation of the Malta action plan is clearly specified. The implementation of the measure related to the market intervention is ongoing. The implementation of the other measures has to start in 2017 and finish by 2020.

Conclusion

Despite the fact that Malta provides a new action plan, it seems to be an update of the one presented in 2016, with some changes in the proposed measures.

The fleet segments that show deterioration in the economic performance are clearly identified and specific tools are tailored them. In connection with this, Malta presents various tools (conservation and monitoring) for the different fleet segments, including closed areas for DFN, closed seasons for FPO and monitoring of landings and activities for the small vessels.

Other measures as an increase in monitoring or promotion of better marketing have been applied to all segments. However, the targets are still not always clear, for example an „increase of biomass by 2020" is listed for the DFN and FPO segments without specifying the species.

4.2.16 The Netherlands (NLD)

EWG 17-08 notes that no fleet segments were identified by the Member State as being out of balance with available fishing opportunities and no action plan was provided.

4.2.17 Poland (POL)

Indicators and Fleet Segments Considered

The action plan proposed by the Polish authorities is based on the values of all indicators prescribed in the 2014 Guidelines (COM (2014) 545 Final) and presented in fleet report for 2016. On that basis, the Polish authorities have identified that the following fleet segments are not in balance with their fishing opportunities.

- PG VL0010: Vessels with an overall length of up to 10 m, fishing with nets and other passive gear
- PG VL1012: Vessels with an overall length of 10 m to 12 m, fishing with nets and other passive gear
- DTS VL1012: Demersal trawlers with an overall length of 10 m to 12 m
- DFN VL1218: Vessels with an overall length of 12 m to 18 m, fishing with nets
- DTS VL1218: Demersal trawlers with an overall length of 12 m to 18 m
- DTS VL1824: Demersal trawlers with an overall length of 18 m to 24 m

All of the above fleet segments operate in the Baltic Sea.

The measures in the Polish action plan are exactly the same as those proposed in the action plan submitted together with their fleet reports for the period of 1 January to 31 December 2014 and 1 January to 31 December 2015 and were covered by a programme of permanent and temporary cessation of fishing activities (2014-2020 Operational Programme 'Fisheries and the Sea'), financed from the budget of the European Maritime and Fisheries Fund.

The rationale for identifying all of the above fleets as being out of balance with available fishing opportunities is given in the Member State's action plan.

Adjustment Targets and Tools

The tools in the Polish action plan include permanent and temporary cessation of fishing activities, both of which are to be financed under the OP FISH 2014-2020 of the EMFF. Permanent cessation of fishing activities is to be achieved through the scrapping of fishing vessels.

While the action plan lists the criteria by which vessels and fishermen may be eligible to apply for aid to permanently or temporarily cease fishing activities, no adjustment targets are specified.

Timeframes for Implementation

Permanent cessation of fishing activities is time-limited (until 31 December 2017) and coincides with the provisions for financial assistance for decommissioning under the EMFF (Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund). The timeline for temporary cessation of fishing activities is not specified

Conclusion

The fleet segments, tools, targets and timeframe for implementation of the measures proposed in the Polish action plan submitted with their Annual fleet report for 2016 is summarised in Table 5.2.17.1

Table 5.2.17.1. Summary of the Polish action plan

Fleet name	Area	Tools*	Targets	Timeframe
VL0010 PG	Baltic Sea	PC	None specified	Before 31 Dec. 2017**
VL1012 PG	Baltic Sea	PC	None specified	Before 31 Dec. 2017**
VL1012 DTS	Baltic Sea	PC	None specified	Before 31 Dec. 2017**
VL1218 DFN	Baltic Sea	PC	None specified	Before 31 Dec. 2017**
VL1218 DTS	Baltic Sea	TC	None specified	None specified
VL1824 DTS	Baltic Sea	TC	None specified	None specified

* PC – permanent cessaton of fishing activities funded under the EMFF
TC – temporary cessation of fishing activities funded under the EMFF
** - The plan envisages that the segments indicated may become eligible for aid for temporary cessation of fishing activities after 31 December 2017.

4.2.18 *Portugal (PRT)*

Indicators and Fleet Segments Considered

The Portuguese fishing fleet consisted of 7,980 vessels distributed over the mainland the Autonomous Region of the Azores and the Autonomous Region of Madeira. The Portugal national fleet report states that "A combined analysis of the results of indicators for use of vessels and biological and economic sustainability shows that the Portuguese fleet capacity is in balance with fishing opportunities for all segments". However, an action plan was presented for those two fleet segments that Portugal considers to be out of balance with fishing opportunities.

The Portuguese action plan includes information about the results of biological and economic indicators for imbalanced fleet segments. With regard to the fleets of outermost regions, two segments of the Madeira fleet have continued negative economic performance as well as negative biological indicators. The technical indicator performance was not presented in the action plan. However, the fleet report provides technical indicator for the fleet which operates with respect to the Madeira region. The technical indicator for these fleets demonstrate an improvement over 2015 despite the fact that vessels targeting tuna is bound to seasonal fishing, as compared to vessels for deep water species that operate all year long.

The action plan identifies two fleet segments that demonstrate potential signs of imbalance.

The structural imbalance is considered to exist in HOK vessels from 24m to 40m, operating exclusively in tuna fishing with pole-and-line. The catches of these species vary every year and the landings value of that segment cannot cover all expenses, meaning that this activity is unprofitable. The segment has a negative biological indicator. The segment is based on one species, the bigeye tuna (*Thunnus obesus*) (63% of the economic value of landings), which is considered by the most recent stock assessment published by ICCAT as being overfished with a fishing mortality in 2014 greater than the sustainable fishing mortality. A significant segment dependency from one species and possible future quota reduction of this species could further aggravate the situation of structural economic imbalance.

The MGP segment, including vessels from 18m to 24m, is the second segment where imbalance is considered. The target species for the segment is common mackerel and blue jack mackerel, which average price demonstrate a sharp decrease. As the result, the insufficient income cannot cover an operating and capital costs displaying low or negative profitability. Portugal assess the segment to have a negative biological indicator due to significant dependence on catches of the two species, horse mackerel (*Trachurus picturatus*) and common mackerel (*Scomber colias*), which represented 99% of the landings value in 2016 and are considered in the recent analytical assessment of the respective stocks exploited by the regional fleet as being overfished.

Adjustment Targets and Tools

The proposed adjustment targets are clearly stated in the action plan.

The capacity adjustment targets are to reduce the fleet segment HOK vessels from 24m to 40m by decommissioning 2 vessels with approximately 23% of the total GT and 21% of a total kW out of 8 vessels at that segment.

With the aim of adjusting fleet capacity to available resources, the decommissioning of 2 MGP vessels from 18m to 24m with approximately 73% of the total GT and 77% of kW of the total GT and kW out of 3 vessels at that segment. The adjustment targets are summarised in the table 5.2.18.1.

Table 5.2.18.1 Adjustment targets presented in Portuguese action plan with their Annual fleet report for 2016

			Fleet	Proposed reduction		
Area	Gear	Length	Number	Number	GT	kW
Azores and Madeira	HOK	VL2440	8	2	300	900
	MGP	VL1824	3	2	100	600
Total			11	4	400	1500

It is expected that the introduced measures will be achieved through the permanent withdrawal from activity.

Timeframes for Implementation

A clear timeframe for implementation of the proposed measures is described in the action plan. The completion of the measure of permanent cessation of fishing activities is expected before 31.12.2017, coinciding with the end of the provisions for decommissioning aid under the EMFF.

Conclusion on Assessment of Proposed Measures

The Portuguese fleet report 2016 and action plan contain detailed analysis of fleet segments and an explanation of the reasons why a fleet segment is considered to show imbalance. There is clear and good consistency between the fleet report and action plan. The action plan focuses on improving fishing opportunities and biological sustainability. The tools and timeframes for implementation to achieve the targets in the action plan are clearly outlined. According to the action plan the measure of permanent cessation of fishing activities will be finalized by the end of 2017.

The fleet segments, tools targets and timeframe for implementation of the measures proposed in the Portuguese action plan submitted with their Annual fleet report for 2016 is summarised in Table 5.2.18.2

Table 5.2.18.2. Summary of the Portuguese action plan with their Annual fleet report for 2016

Fleet name	**Area**	**Tools***	**Targets**	**Timeframe**
VL2440 HOK	Azores and Madeira	PC	Decrease of capacity by 900 kW	Before 31 Dec. 2017
VL1824 MGP	Azores and Madeira	PC	Decrease of capacity by 600 kW	Before 31 Dec. 2017

* PC – permanent cessaton of fishing activities funded under the EMFF

4.2.19 *Romania (ROU)*

Apart from the following addition, the Romanian action plan submitted with their 2016 fleet report is the same as that submitted with the fleet report for 2015 and no additional fleet segments have been identified for action "*General measure ensuring the balance between fishing capacity and fishing opportunities for the national fleet is the assistance for marketing support, i.e. the construction of a fish auction in Tulcea city. This auction will cover the needs of Black Sea fishermen to sell their products by electronic means through this auction in order to increase the income by transparent and more efficient first sale system opened for the registered merchants – Deadline 31.12.2019."*

The action plan contains a series of actions for all the fleet segments in order to improve the economic and technical indicators (increasing the number of at sea and issuing fishing permits), fisherman training, partnership between scientists and fisherman, engine replacement, gear selectivity and creating authorization systems to regulate the number of permitted gears for overexploited species.

Given that there are no fleet segments that are considered to be out of balance with their fishing opportunities the proposed action plan is an attempt to manage the existing capacity to enhance its efficiency and economic performance.

4.2.20 *Slovenia (SVN)*

In September 2016, Slovenia adopted "Rules on the register of fishing vessels and the vessels used in aquaculture" (Official Gazette of the Republic of Slovenia, No 60/16). The 2016 fleet report for Slovenia states that the Ministry of Agriculture, Forestry and Food is in the process of revising the national fleet register in relation to these rules to enable better fleet management.

Indicators and Fleet Segments Considered

The Slovenian fleet report for 2016 states that technical, economic and biological indicators were calculated for:

- purse seine fleet with two active vessels in 2015 (PS VL0612, PS VL1218);

Technical and economic indicators (not biological indictors) for:

- netter fleet with 59 active vessels in 2015 (DFN VL0006 and DFN VL0612).

The Slovenian fleet report for 2016 provided an action plan for these fleet segments despite the MS expressing *"serious reservations regarding the application and appropriateness of the indicators proposed by the Guidelines".*

Adjustment Targets and Tools

Slovenia participates in the implementation of the multiannual management plan for fisheries on small pelagic stocks in the GFCM-GSA 17 (Northern Adriatic Sea) (GFCM/37/2013/1) and on transitional conservation measures for fisheries on small pelagic stocks in GSA 18 (Southern Adriatic Sea). In 2016, the multiannual management plan was amended to establish additional emergency measures.

For the purse seine segment, the tools applied under the management plan included:

i. Fishing vessels targeting small pelagic species shall not exceed 180 fishing days per year, with a maximum of 144 fishing days targeting sardine and with a maximum of 144 fishing days targeting anchovy
i. Spatio-temporal closures to avoid spawning and nursery areas
ii. Not exceeding 2014 catch levels
iii. Fleet GT and KW not exceeding 2014 levels

The action plan reports that 4 Slovenian vessels will be affected, but it does not state whether the maximum days at sea permitted would result in a reduction in fishing effort, e.g. in comparison to the previous year's fishing activity.

Slovenia proposes the use of temporary cessation measures through its EMFF Operational Programme to support the implementation of temporal closures. It also extended its 'temporary non-issuing of licenses for commercial fishing for certain fishing gears' to the purse seine segment, thereby preventing additional vessels entering the fleet.

The action plans for the netters 00-06m and 06-12m identify two areas that are intended to contribute to capacity management of the segments:

i. Implementation of the measure "Support for the design and implementation of conservation measures and regional cooperation" from Article 37 of the EMFF Regulation to ensure effective regional cooperation on the level of the North Adriatic Sea for implementation of the relevant measures of the CFP to contribute to the achievement of MSY for the stocks concerned.
ii. National management measures, specifically the extension of "Temporary non-issuing of licenses for commercial fishing for certain fishing gears" to include drift and fixed nets (GNS and GTR), with the aim of preventing additional capacity entering the netter fleet.

There are no specific tools proposed in relation to the Regional Cooperation (Article 37) measure. No adjustment targets are specified in relation to either of the above measures.

Timeframes for Implementation

The timeframe for implementation of the Slovenia action plan for purse seine is led by the management plan for small pelagics in the North Adriatic and is proposed to be 'as long as requested by the pertinent GFCM Recommendations in force'.

The action plans suggest that the EMFF programme, running from 2014 to 2020, defines the timeframe for the implementation of temporary cessation measures for the purse seine segment and Article 37 support for the netter segments.

Conclusion on Assessment of Proposed Measures

The fleet segments, tools, targets and timeframe for implementation of the measures proposed in the Slovenian action plans submitted with their Annual fleet report for 2016 is summarised in Table 5.2.20.1.

Table 5.2.20.1 Summary of the Slovenian action plan

Fleet name	**Area**	**Tools***	**Targets**	**Timeframe**
PS VL 0612	North Adriatic	DaS	Max 180 days	Annual**
		TC	None specified	2020 (EMFF end)
PS VL 1218	North Adriatic	DaS	Max 180 days	Annual**
		TC	None specified	2020 (EMFF end)
DFN 0006	North Adriatic	LC	None specified	2020 (EMFF end)
DFN 0612	North Adriatic	LC	None specified	2020 (EMFF end)

* DaS = Days at Sea, TC = temporary cessation of fishing activities, LC = License cap
** the current multi-annual plan has determined measures and targets for 2017

4.2.21 *Spain (ESP)*.

The Spanish fleet report for 2016 includes a comprehensive action plan for the imbalanced fleets.

Indicators and Fleet Segments Considered

The action plan includes consideration of the balance indicators for each fleet segment and clearly states which fleet segments are considered in imbalance. Spain has divided the reasons for imbalance into biological and economic causes respectively. The table 5.2.21.1 contains the imbalanced fleet segments and the main causes of imbalance.

Table 5.2.21.1 Imbalanced fleet segments by area and the main causes of imbalance

Fleet segment	Area	Imbalance primarily by biological causes	Imbalance primarily by economic causes
DTS VL2440	Cantabria and North West	x	
PS VL1824	Cantabria and North West	x	
PS VL2440	Cantabria and North West	x	
DFN VL1840	Cantabria and North West	x	
HOK VL0018	Cantabria and North West	x	
HOK VL1824	Cantabria and North West	x	
DFN VL0018	Cantabria and North West		x
HOK VL2440	Cantabria and North West		x
DRB VL0018	Cantabria and North West		x
FPO VL0018	Cantabria and North West		x
PMP VL0018	Cantabria and North West		x
PS VL0018	Gulf of Cadis	x	
DTS VL0018	Gulf of Cadis		x
DTS VL1840	Gulf of Cadis		x
PS VL1840	Gulf of Cadis		x
DFN VL0018	Gulf of Cadis		x
DTS VL1824	Mediterranean	x	
DTS VL2440	Mediterranean	x	
PS VL0018	Mediterranean	x	
PS VL1824	Mediterranean	x	
PS VL2440	Mediterranean	X	
HOK VL0024	Mediterranean	X	
PGO VL1824	Mediterranean	X	
DFN VL0018	Mediterranean		x
PGO VL0018	Mediterranean		x
DRB VL0018	Mediterranean		x
PMP VL0018	Mediterranean		x
PMP VL0018	Canaries		x
PMP VL1840	Canaries		x
HOK VL0018	Other fishing regions		x

Adjustment Targets and Tools

The Spanish action plan includes the following number of tools to address the imbalanced fleets:

a) Compilation of biological data to improve the understanding of the fishing resources in order to better address actions for imbalanced fleets segment
b) Effort reduction methods, including establishment of a legal framework for transferable fishing concessions; permanent removal of capacity (vessels) or reduction in the number of days that the fleet can be active in the fishery; assignment of fishing opportunities, where appropriate; voluntary cessation; and other measures such as temporary permits to change method and home port.

c) Ecosystems recovery measures. This includes creation and maintenance of marine reserves, establishment of other protected areas in addition to the reserves, as well as restricting fishing activity to specific zones and times.
d) Fleet competitiveness promotion measures. This includes consultancy services; energy efficiency audits and programmes; investments in fishing methods; investment to handle unwanted, unavoidable catches; investment in operations which contribute to the gradual elimination of discards and by-catches (resource conservation); investment to increase the value of fishing products and innovative onboard investment; and temporary cessation of fishing activity.
e) Commercial improvement measures. This includes measures to find new markets and improve commercial conditions such as species labelling, promotion of sustainable products, etc.
f) Fishery inspection measures. This includes actions to enable discards to be characterised as reliably as possible to guarantee compliance and improve the competitiveness of the fleet.

The canaries has furthermore given an independent action plan with measures to promote competitiveness; improvement in marketing; support for safety equipment for the small scale fleet; support for inspection and control of effort compliance; and efficient control and management of data gathering.

There are no specific targets for the tools, in terms of how the tools are expected to reduce capacity. However, in the case of permanent and temporary fishing concessions, the amount of money expected to be spent has been reported. Furthermore, the amount of money allocated to different investments have been stated.

Timeframes for Implementation

Spain has provided time frames for the Canaries action plan. Most of the maintaining measures do not have any clear time frame. Exceptions are the temporary cessations of fishing activity, which are extended to 2017 and 2018. It is also mentioned that there are permanent fishing cessations in the CNW fleets out of balance for 2017 and with the possibility to extend this measure to 2018. It is furthermore expected that the government will make an announcement for support for final cessation of vessels for 2017 for the Autonomous Communities of Andalucia, the Balearics, Valencia and Catalonia in the Mediterranean.

Conclusion

Spain has delivered a detailed action plan that contains decisions of which fleet segments are in imbalance and how to address the biological and economic causes for these imbalances. It specifies multiple tools to address this imbalance, but only in a few cases have these tools been related to specific fleets. Furthermore, although exact time frames have been given for some tools, there are no exact times for most of the tools mentioned in the action plan.

4.2.22 *Sweden (SWE)*

Sweden's fleet report for 2016 takes a holistic approach to determining the status of its fleet segments through considering the biological, economic and technical indicators suggested by the guidelines, along with contextual information such as the proportion of

catch that each fleet segment accounts for. It notes that the SHI indicator and some economic indicators considered in isolation may signal imbalance for some passive gear segments, but those gears only accounted for between 2% and 4% of the catch for those stocks in the years 2008 to 2015.

A number of management schemes (some contributing to multi-annual management plans for certain fisheries) are mentioned in the 2016 report:

i. The kilowatt day systems in Skagerrak, Kattegat and the North Sea
ii. Fishing for Norway lobster using bottom trawlers equipped with a sorting grid (effort being managed through setting maximum kilowatt days);
iii. Permission for fishing cod in the Baltic Sea (limiting the number of vessels permitted in the fishery to those fishing the previous year).

The report notes that these schemes have contributed to an overall reduction in effort across the Swedish fleet. It also notes the implications of the landing obligation in terms of fleet activity. A new system of yearly allocation of fishing opportunities was developed and introduced from January 2017 to allow more flexibility in uptake and transfer between vessels.

EWG 17-08 notes that as the Member State concluded that no fleet segments were imbalanced, no action plan was provided.

4.2.23 *United Kingdom (GBR)*

The UK stated in the annual fleet report that they assessed each fleet segment as a combination of indicators and *„none of them can be conclusively defined as out of balance using the full range of indicators available".* At the same time, it is highlighted that any excess of established thresholds is a sign of potential imbalances in the given segment. Due to those potential imbalances, adjustment measures should be established. As a solution, UK has presented an action plan for all fleet segments for which there is a sign that they are not completely in balance. The action plan contains adjustment targets and tools to address the potential imbalances of these fleet segments. The plan is in tabular form and includes each fleet segment that has indicator values outside of the recommended balance indicator thresholds. The results of the biological and economic indicators were used in the action plan as a basis for the assessment. Additional information on the technical performance of the segments is provided in Appendix E of the national fleet report for 2016.

The year of implementation of some of the proposed measures is 2015.

With regards to the impacts of the landing obligation on the balance of the fleet, the UK states that: "*As result UK fisheries administrations may in the future want to consider the use of permanent and temporary cessation in addition to the existing suite of actions. These measures are not included in the current Fleet Action Plan or Operational Programme, but may be introduced in the future depending on need*".

<u>Indicators and Fleet Segments Considered</u>

All fleet segments with potential imbalance from an economic or biological point of view for three consecutive years are considered in the UK action plan (See the action plan which is in tabular form, including each segment with indicator values, adjustment targets, tools and time frame).

Adjustment Targets and Tools

The basic targets set out in the UK action plan for achieving balance of the fleet are to adjust the value of indicators that are currently outside of recommended thresholds to bring them within such thresholds (SHI, SAR, ROI, CR/BR).

The adjustment tools presented by the UK are:

(i) Continue improvement process towards SHI being in balance through observance of TAC/Quota limits designed to bring the stocks involved to MSY, including compliance with regional multi-annual management plans and technical measures where appropriate.

(ii) Introduction of a transition stage to the landing obligation for the demersal fisheries. This includes support to increase selectivity measures and support to implement therequirements of landings obligation in place.

(iii) Implement requirements as in Regulation 2015/960, in Article 10, Council Regulation 2016/72 and any subsequent requirements under EU legislation and any additional measures identified as necessary as national measures.

(iv) Improve the state of stocks by observance of TAC limits designed to achieve MSY, especially for cod stocks where there are:
- Limits on entry to fleet segment and effort restrictions;
- Incentives of gear selectivity measures, including the mandatory use of highly selective gears in some sea areas, such as the Irish Sea;
- Mandatory conservation related measures (Real Time Closures).

(v) Ancillary benefits from the Cod Recovery regime measures - e.g. conservation and gear selectivity measures; benefits from CFP reform.

(vi) Support measures in the EMFF Operational Programme are available at preferential match-funding rates, such as assistance for small-scale fleet vessels to meet the requirements of the landing obligation, and on-board safety measures.

(vii) Continuing support for development of marketing initiatives, including new measures within the EMFF such as the establishment of a small-scale fleet Producer Organisation.

The UK action plan asserts that the adjustment tools are specific to different fleet segments, and are tailored so that their performance should lead to the achievement of targets (thereby altering indicators to within the recommended thresholds).

Timeframes for Implementation

The timeframe for implementation of the UK action plan is clearly specified. Despite the fact that the implementation of some measures started in 2015, the end date for each stage of achieving the tools is set. Also, there is a set deadline for completion of the action plan in its entirety (2020).

Conclusion on Assessment of Proposed Measures

On the one hand the UK states that none of the fleet segments, according to the combination of indicators, "can be conclusively defined, as out of balance using the full range of indicators available". On the other hand, the UK recognises that imbalance potentially exists for some fleet segments. Therefore, the UK has presented an action plan for all segments for which there is potential imbalance and which contains associated adjustment targets and tools.

The UK action plan is based on a full assessment of indicators as included in the fleet report. The overall target set by the UK for achieving balance of the fleets is to adjust

the value of indicators that are currently outside of recommended thresholds to bring them within specified thresholds. The tools and timeframes for implementation to achieve the targets in the action plan are clearly outlined.

5 TOR 3 – COMMENTS ON PROPOSED MEASURES

5.1 Introductory Remarks for TOR 3

In addressing this term of reference the Expert Group adopted a step-wise approach as follows:

1. The action plans submitted together with the 2016 Member States' fleet reports were reviewed to identify any fleet segments were additional to those included in the previous action plan. Such additional segments are listed under "Identification of additional fleet segments" in the sections below relating to each Member State.
2. The information provided in support of the measures proposed for the additional segments was reviewed to ascertain whether such measures are likely to be sufficient to redress any imbalance in the additional segments. Relevant comments are given under "Comments on proposed measures" in the sections relating to each Member State.
3. In some cases, Member States did not present new or revised action plans or has reported on action plans implemented prior to 2016. In such cases the Expert Group has commented accordingly.
4. Any conclusions arising from points 1-3 above review are also listed by Member State

To undertake such an assessment, the EWG would require that the Member State's action plan contains the minimum information outlined in section 3 of this report.

5.2 Comments on Proposed Measures

5.2.1 Belgium (BEL)

Identification of Additional Fleet Segments

An action plan is presented for the Belgian fleet, but no additional fleet segments have been identified for action.

Comments on Proposed Measures

In the absence of any new actions there are no measures on which to comment.

Conclusion

In the absence of any new or revised actions there are no conclusions to be drawn.

5.2.2 Bulgaria (BGR)

Identification of Additional Fleet Segments

No additional fleet segments have been identified as being out of balance with their fishing opportunities in the Bulgarian fleet report for 2016 and no action plan is presented. The EWG 17-08 notes however that the report describes the progress in implementing the measures contained in the action plan that accompanied the fleet report for 2015. Such measures focus largely on decommissioning and relate to the following vessel length groups:
- Fishing vessels from 0 to 6 m in length, using any type of fishing gear;
- Fishing vessels from 6 to 12 m in length, using any type of fishing gear;
- Fishing vessels from 12 to 18 m in length, using any type of fishing gear;
- Fishing vessels from 18 to 24 m in length, using any type of fishing gear.

With respect to inactive fishing vessels, the fleet report for 2016 indicates that Bulgarian authorities continue to apply national legislation according to which there is the possibility of termination of the operation of the fishing licenses and authorizations if for two consecutive years the vessel has not engaged in any fishing activity.

Comments on Proposed Measures

In the absence of any new action plan there are no additional measures on which to comment.

Conclusion

There is no new or revised action plan associated with the Bulgarian fleet report for 2016. Hence there are no measures to assess.

The Bulgarian fleet report for 2016 outlines the progress made in implementing the measures contained in the action plan submitted with their fleet report for 2015. The STECF review of those measures are presented in the report of the STECF EWG 16-09 (STECF 16-18).

5.2.3 Croatia (HRV)

Identification of Additional Fleet Segments

No additional fleet segments have been identified as being out of balance with their fishing opportunities in the Croatian fleet report for 2016 and no action plan is provided. However, the fleet report for 2016 proposes a number measures in addition to those contained in the action plan accompanying the ir fleet report for 2015.

Comments on Proposed Measures

Croatia plans to implement additional effort limitations for vessels targeting anchovies and introducing complementary obligations of spatial and temporal closures. Capacity reduction measures are to be implemented on national level under national management plans (implemented by the EFF OP and EMFF OP) and applied to the purse seine fleet are considered to be complementary to effort measures foreseen through the GFCM plan. The measures considered in the fleet

report for 2016 to redress the imbalance in the all PS segments are the following:
-Maximum of 144 days targeting anchovy and 144 days per vessel targeting sardine;
-Closures for vessels over 12 m length overall for not less than 6 months which shall cover at least 30 percent of the area which has been identified as a nursery area or as an important area for the protection of early age classes of fish (in territorial and inner sea);
-Limitation of overall fleet capacity of purse seiners actively fishing for small pelagic stocks in terms of gross tonnage (GT) and/or gross registered tonnage (GRT), engine power (kW) and number of vessels, as recorded both in national and GFCM registers in 2014;
-Catch limit in 2017 and 2018 has been set at the level of total catch of small pelagics (sardine and anchovy) in 2014;
-Spatial and temporal closure of no less than 15 continuous days and up to 30 continuous days taking place between 1 April and 31 August;

Conclusion

The Expert group considers that other management measures, effort management, no-take zones and additional technical measures, if effectively implemented, may offer a means to manage capacity utilization and deployment, in terms of redressing any imbalance between capacities and fishing opportunities. The action plan indicates that measures for permanent cessation of fishing activities implemented in 2015 and 2016 resulted in a decrease of capacity of authorized PS and DTS (using demersal trawls, OTB) fleet.

5.2.4 Cyprus (CYP)

Identification of additional fleet segments

No new or revised action plan is presented for the Cyprus fleet and no additional fleet segments have been identified for action.

Comments on Proposed Measures

In the absence of any new or revised action plan there are no measures on which to comment.

Conclusion

In the absence of any new or revised action plan there are no conclusions to be drawn

5.2.5 Denmark (DNK)

Identification of Additional Fleet Segments

No new or revised action plan is presented for the Danish fleet and no additional fleet segments have been identified for action.

Comments on Proposed Measures

In the absence of any new or revised action plan there are no measures on which to comment.

Conclusion

In the absence of any new or revised action plan there are no conclusions to be drawn.

5.2.6 Estonia (EST)

Identification of Additional Fleet Segments

No new or revised action plan is presented for the Estonian fleet and no additional fleet segments have been identified for action.

Comments on Proposed Measures

In the absence of any new or revised action plan there are no measures on which to comment.

There were no major changes in the administrative procedures concerning Estonia's fleet management during 2016.

Conclusion

In the absence of any new or revised action plan there are no conclusions to be drawn

5.2.7 Finland (FIN)

Identification of Additional Fleet Segments

No new or revised action plan is presented for the Finnish fleet and no additional fleet segments have been identified for action.

Comments on Proposed Measures

In the absence of any new or revised action plan there are no measures on which to comment.

Conclusion

In the absence of any new or revised action plan there are no conclusions to be drawn.

5.2.8 France (FRA)

Identification of Additional Fleet Segments

The French fleet report for 2016 identifies 3 additional fleet segments that are out of balance with their fishing opportunities compared to those in the action plan submitted with the fleet report for 2015:

DTS_0612 in the Mediterranean Sea
DTS_VL1218 in the Mediterranean Sea
Atlantic eel - All vessels that report a by-catch of eels in the Atlantic ocean.

Compared to 7 fleet segments identified in the action plan submitted with the fleet report for 2015, are no longer considered to be out of balance and not included in the action plan accompanying the fleet report for 2016.

According to the French fleet report, the reason that the seven fleets are no longer included in their proposed action plan, relates to improvements in the calculation methods for biological indicators and the overharvested stocks are no longer the most important in the landings of these fleet segments.

Comments on Proposed Measures

With exception of the segment labelled "Atlantic eel", the adjustment tools and timeframes that are proposed in the action plan submitted with the fleet report for 2016 are similar to those proposed in the previous action plan (Table 6.2.8.1).

For the "Atlantic eel" segment scrapping of 40-50 vessels is foreseen wheras in the action plan submitted with the fleet report for 2015, no vessels were earmarked for scrapping.

Table 6.2.8.1. Comparison of capacity reduction targets (Number of vessels, GT and kW) in the action plans (AP) proposed in the action plans submitted with the fleet reports for 2015, 2016 and 2017 Annual fleet reports for France.

			Proposed reduction 2016 AP			Proposed reduction 2017 AP		
Area	Gear	Length	Number	GT	kW	Number	GT	kW
Bay of Biscay	MGO	VL0010	5-6	15	360			
	DFN	VL1012	5-6	60	750			
		VL1218	3-4	150	760	3-4	150	730
		VL1824	1-2	230	700	2-3	260	760
North Sea East Coast	DFN	VL0010	1	12	60			
		VL1012	11	120	1800	10	104	1606
		VL1218	1	12	60			
Atlantic - Eel		VL0024				40-50	220	3250
Mediterranean Sea	DTS	VL0612				1	10	100
		VL1218				2	20	400
		VL1824	1-2	50	240	1	50	240
		VL2440	2	230	620	2	230	620
	DFN	VL0006	5			5		
		VL0612						
	MGO	VL0612						
		VL0006						
Total			35-39	560	4010	66-78	1044	7706

Conclusion

With the data and information provided in the fleet report for 2016 and associated action plan, the EWG 17-08 cannot determine whether the measures proposed can be considered sufficient to balance the additional imbalanced fleets.

5.2.9 Germany (DEU)

One additional fleet segment have been identified to be in imbalance in the 2016 fleet report compared to the fleets identified as in imbalance in 2015. This fleet segment is the smaller vessels below 10 meters with passive gears (PG VL0012). This fleet counts 135 vessels (as at 31 December 2016) with a maximum length overall of between 8 and 10 metres engaged in small-scale coastal fisheries using passive gear. These vessels operate almost exclusively in the Baltic Sea. The main species fished are herring and cod.

Shifting fishing opportunities towards coastal fisheries at a national level by quota swaps is mentioned as a measure to improve the segment's quota situation.

MSC certification is another measure to guarantee sales and this is expected to raise income levels in this fleet segment. 30 % of the German basic quota for Baltic herring and is expected to be completed in early 2018.

Marketing support is another measure. Funds are made available under the EMFF for generic advertising aimed at improving the image of small-scale fisheries and encouraging consumers to pay higher prices. There are also measures that will ensure that aid is targeted towards profitable businesses and encourage the unprofitable businesses uses temporary or permanent decommissioning schemes.

Conclusion

With the data and information provided in the fleet report for 2016 and associated action plan, the EWG 17-08 cannot determine whether the measures proposed can be considered sufficient to balance the additional imbalanced fleets.

5.2.10 Greece (GRC)

Identification of Additional Fleet Segments

The Greek fleet report for 2016 primarily relates to three different fleets; purse seiners, bottom trawlers and the coastal fleet. The report concludes that actions should be taken regarding capacity reduction of costal fleet which contains 95% of the total number of vessels in the Greek fleet. Accordingly an action plan is provided together with the fleet report for 2016.

Comments on Proposed Measures

The only measure proposed is for permanent cessation of fishing activities. The target is to reduce the number of vessels by 10% which is expected to give rise to a reduction in GT of 1000 - 3000 GT, and a reduction in kW of 7000-21000 kW.
Such reductions should be achieved by 31 December 2017.

The rationale for the 10% reduction target is not explained in the report and there is insufficient information in the report to assess the potential impact of such a reduction on the different resources exploited by the coastal fleet.

The action plan also foresees implementation of temporal cessation of fishing activities for the coastal fleet following an assessment of balance in the Fleet report for 2017 although at present no specific tools, targets or timeline have been specified.

Conclusion

The Greek action plan accompanying the fleet report for 2016 relates to 14 650 vessels of the coastal fleet using different gears and targeting multiple species. Although a target for up to 10% reduction in the number of vessels is proposed, the rationale for such a reduction is not described and the potential impact cannot be assessed because sufficient appropriate information is not available.

5.2.11 Ireland (IRL)

Identification of Additional Fleet Segments

No new or revised action plan is presented for the Irish fleet and no additional fleet segments have been identified for action.

Comments on Proposed Measures

In the absence of any new or revised action plan there are no measures on which to comment.

Conclusion

In the absence of any new or revised action plan there are no conclusions to be drawn.

5.2.12 Italy (ITA)

Identification of Additional Fleet Segments

The action plan accompanying the 2016 fleet report relates GT reduction to fleet segments belonging to the trawl/*rapido* and purse seine/trawl vessel groups. Such vessel groups were also included in the action plan accompanying the fleet report for 2015.

The action plan identifies 3 additional fleet segments compared to previous year's action plan. The additional segments are listed in Table 6.2.12.1.

Table 6.2.12.1. Fleet segments included in the action plan accompanying the 2016 fleet report for Italy that were not included in the previous year's action plan and associated capacity reduction targets.

Fleet segments	**GSA**	**GT reduction target**
DTS VL2440	GSA 17	976
HOK VL 1218	GSA 10	Not specified
HOK VL 1824	GSA 19	Not specified

Comments on Proposed Measures

The action plan proposes to reduce capacity (GT) of the DTS VL 2440 vessel groups by 8% with the removal of 976 GT from a total of 12,203 GT for this fleet segment in this area. This is to be achieved through permanent cessation.

There are specific legislative provisions to limit vessels permitted to fish in the long-finned tuna (*Thunnus alalunga*) fishery and the swordfish (*Xiphias gladius*) fisheries. This tool may be intended to address the imbalance identified in the HOK segments in GSA 10 and 19, but this is not explicitly stated in the Action Plan and targets are not specified for these fleet segments.

Conclusion

Three additional fleet segments are included in the action plan accompanying Italy's fleet report for 2016, compared to the previous year's action plan.

For the additional trawl segment (DTS VL 2440 in GSA 17), a GT reduction target using permanent cessation is specified, as is a timeframe (end of 2018).
The two additional HOK segments do not have specific capacity reduction targets, tools or timeframes, but it is assumed that permitting schemes within the long-finned tuna and swordfish fisheries are intended to address the imbalance identified in these two fleet segments.

With the data and information provided in the fleet report for 2016 and associated action plan, the EWG 17-08 cannot determine whether the measures proposed can be considered sufficient to balance the additional imbalanced fleets.

5.2.13 Latvia (LVA)

Identification of Additional Fleet Segments

TheLatvian fleet report for 2016 does not include a new or revised action plan. However, taking into account the information already provided in the Annual report on the Latvian fishing fleet for 2013 and the action plan attached to that as well to the fleet report for 2015, Latvia is planning to scrap the entire VL 24-40m Netters segment targeting only Eastern Baltic cod. Such vessels are unable to switch gears to fish for other species.

Comments on Proposed Measures

No comments other than those given in the report from the previous (2015) meeting of this Expert group (STECF 16-18) are warranted because the Action plan for VL 24-40 m netters targeting Eastern Baltic cod is still extant and is the only action plan currently proposed.

The EWG notes that, in 2016 a new Fisheries information system (ICIS) was completed to improve the former ICIS, in order to comply with all the requirements set by the EC Fisheries control regulation. This ensured not only improvement of the fisheries data quality by the crosschecks and data validation but also facilitates the work of the personnel working with ICIS.

In order to improve the fleet management system through the Fisheries ICIS automatic vessel data input in the ICIS from the Latvian Ship Register (LSR) was developed.

There were no significant changes in 2016 in the administrative procedures.

Conclusion

Given that Latvia has not provided a new or revised action plan the conclusions of the Expert Group remain the same as those given in previous Report:
"Latvian authorities present a plan to decommission one segment, DFN 24-40, targeting cod stocks in the Baltic Sea. Adjustment targets and tools are specified, while a detailed timeframe for implementation is lacking.

5.2.14 Lithuania (LTU)

Identification of Additional Fleet Segments

The 2017 Lithuanian fleet report does not contain any new or revised action plan and no explicit information on the implementation or outcomes of the action plan contained in the 2015 fleet report is provided. However the EWG 17-08 notes that compared to the situation in 2015, the fleet report indicates that the total capacity of the Lithuanian fishing fleet declined by 4,058 GT (7,91 %) and 2,304 kW (4,57%).

Comments on Proposed Measures

In the absence of any new action plan there are no measured on which to comment.

Conclusion

In the absence of any new or revised action plan there are no conclusions to be drawn.

5.2.15Malta (MLT)

Identification of additional fleet segments

Despite to the fact that Malta provides a new action plan, it is an update of the one provided together with the fleet report for 2015, with some modifications to the proposed measures. There are no additional segments included into the action plan accompanying the fleet report for 2016.

Comments on Proposed Measures

The measures proposed in the action plan accompanying the fleet report for 2016 include the following:

1. The proposal to install GPRS technology under 12m LOA and mandatory logbooks for vessels under 10m LOA has been removed and replaced with a proposal to introduce automatic weighing and labeling of all landings by the under 12 m fleet to guarantee that all landings will be recorded.

2. The structural measures prescribed for the DFN and PS segments in the action plan accompanying the Maltese fleet report for 2015 have been removed. Each of these segments comprises of only one vessel.

The report also notes that as the PGP segment is a mixed gear segment, it is expected to be indirectly addressed through the measures for the other segments (DFN - Prohibition of fishing in bays and creeks from 15 February to 30 August with all types of nets and FPO - Closed season for the months of April and May).

EWG 17-08 notes that no fishing capacity adjustments are foreseen in the Maltese action plan.

Conclusion

In the fleet report for 2016, no additional imbalanced fleets are identified although for some of the segments previously identified for action, the relevant measures in the action plan have been changed.

Although the economic indicators remain negative, they show an improving trend over the period 2008-2015. Such an improvement may in part have arisen because of the measures so far implemented by the MS.

5.2.16 The Netherlands (NLD)

Identification of Additional Fleet Segments

No new or revised action plan is presented for the Dutch fleet and no additional fleet segments have been identified for action.

Comments on Proposed Measures

In the absence of any new or revised action plan there are no measures on which to comment.

Conclusion

In the absence of any new or revised action plan there are no conclusions to be drawn.

5.2.17 Poland (PLD)

Identification of Additional Fleet Segments

Two additional fleet segments are identified in the Polish action plan as being out of balance with their fishing opportunities.

- VL0010 PG: vessels with an overall length of up to 10 m, fishing with nets and other passive gear
- VL1012 DTS: demersal trawlers with an overall length of 10 m to 12 m

Comments on Proposed Measures

The action plan proposes to redress the balance in the additional fleet segments through permanent cessation of fishing activities for eligible vessels. Permanent cessation of fishing activities is to be achieved through the scrapping of fishing vessels and financed under the OP FISH 2014-2020 and the aid will be granted until 31 December 2017.
The EWG 17-08 notes that although no adjustment targets are specified in the action plan.

Implementation of is time-limited (until 31 December 2017) and coincides with the provisions for financial assistance for decommissioning under the EMFF (Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund).

Conclusion

With the data and information provided in the fleet report for 2016 and associated action plan, the EWG 17-08 cannot determine whether the measures proposed can be considered sufficient to balance the following additional fleet segments:

- VL0010 PG: vessels with an overall length of up to 10 m, fishing with nets and other passive gear
- VL1012 DTS: demersal trawlers with an overall length of 10 m to 12 m

5.2.18 Portugal (PRT)

Identification of additional fleet segments

The balance assessment presented in the fleet report 2016 concludes that with regard to the fleets of outermost regions two segments of the Madeira fleet have continued negative economic performance as well as negative biological indicators.

A new action plan is presented for the Portugal fleet in its fleet report for 2016 which includes two fleet segments (Table 6.2.18.1):

HOK vessels from 24m to 40m which operate exclusively in tuna fishing with pole-and-line; and

MGP vessels from 18m to 24m with targeting common mackerel and blue jack mackerel.

Table 6.2.18.1 New segments from the fleet identified as imbalance in the 2016.

Gear	Length Class	Fleet in 2016		
		Number	GT	kW
HOK	VL2440	8	1 286	4 187
MGP	VL1824	3	136	777
Total		**11**	**1422**	**4964**

Comments on Proposed Measures

Table 6.2.18.2 shows the proposed capacity adjustment measures for the fleets identified in the action plan accompanying the fleet report for 2016.

Table 6.2.18.2 Capacity adjustment measures for the fleets identified in the action plan accompanying the fleet report for 2016.

Gear	Length Class	Reduction aim		
		Number	GT	kW
HOK	VL2440	2	300	900
MGP	VL1824	2	100	600
Total		**4**	**400**	**1500**

STECF EWG 17-08 notes that the stated rationale for the reduction in number of vessels fisheries is low or negative profitability arising due to insufficient income to cover operating and capital costs. The increase in income cannot be observed in near future due to the low average prices for the target species and segments significant dependence in recent years on catches of bigeye tuna, horse mackerel and common mackerel. The bigeye tuna was considered by the most recent stock assessment published by ICCAT as being overfished with fishing mortality in 2014 greater than sustainable fishing mortality as well as horse mackerel and common mackerel are considered in the recent analytical assessment of the respective stocks exploited by the regional fleet as being overfished. A possible future quota reduction of these species

could further aggravate the situation of structural economic imbalance.

EWG 17-08 notes that implementation of the targets is time-limited (until 31 December 2017) and coincides with the provisions for financial assistance for decommissioning under the EMFF (Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund).

Conclusion

As the two fleet segments included in the action plan 2016 has significant economic dependence on an overfished resource, the decommissioning of several vessels in these segments could provide the opportunity to increase the average catch per vessel of the remaining vessels, which in turn may lead to an increase in economic performance. However, the extent of any such increase cannot be reliably estimated. Furthermore, the values for the biological indicators (SHI and SAR) may be unaffected by any reduction in vessel numbers.

5.2.19 Romania

Identification of Additional Fleet Segments

Apart from the following addition, the Romanian action plan submitted with their 2016 fleet report is the same as that submitted with the fleet report for 2015 and no additional fleet segments have been identified for action:
"*General measure ensuring the balance between fishing capacity and fishing opportunities for the national fleet is the assistance for marketing support, i.e. the construction of a fish auction in Tulcea city. This auction will cover the needs of Black Sea fishermen to sell their products by electronic means through this auction in order to increase the income by transparent and more efficient first sale system opened for the registered merchants – Deadline 31.12.2019.*"

5.2.20 *Slovenia (SVN)*

Identification of Additional Fleet Segments

No additional fleet segments in the action plan accompanying the fleet report for 2016 were identified by the Slovenian authorities as being out of balance with their fishing opportunities compared to the previous year's action plan.

Comments on Proposed Measures

No additional imbalanced fleet segments are identified in the action plan.

Conclusion

The fleet report for 2016 identifies the same imbalanced fleet segments as the previous year's report. No additional imbalanced fleets are identified.

5.2.21 *Spain (ESP)*

Identification of Additional Fleet Segments

Compared to the action plan for 2015, the Spanish action plan for 2016 contains the following two additional fleet segments that are considered in imbalance.

- PS VL2440 in the Cantabrian and North West
- DFN VL0018 in the Mediterranean Sea

The Spanish action plan assesses the causes for imbalance in the Cantabrian and North West purse seine fleet to be primarily biological, while the causes for imbalance of the netter fleet in the Mediterranean Sea is assessed to be primarily economic.

The tools to address these imbalances includes compilation of biological data, effort reduction methods, ecosystem recovery measures, fleet competitiveness promotion measures, commercial improvement measures and fishery inspection measures, see TOR 2 for an elaboration of these tools.

Conclusion

With the data and information provided in the fleet report for 2016 and associated action plan, the EWG 17-08 cannot determine whether the measures proposed can be considered sufficient to balance the additional imbalanced fleets.

5.2.22 *Sweden (SWE)*

Identification of Additional Fleet Segments

Sweden's fleet report for 2016 does not include an action plan.

Sweden expresses caution in the interpretation of the various indicators and determines that the passive gear segment, which exhibits some negative indicator results, does not require adjustment.

Comments on Proposed Measures

The fleet report for 2016 describes a number of fishing effort management measures that are applied to the Swedish fleet.

The fleet report contains no action plan and no additional fleet segments are identified as requiring adjustment.

Conclusion

No additional fleet segments are identified in the fleet report for 2016 and there is no action plan.

5.2.23 United Kingdom (UK)

Identification of additional fleet segments

The total number of the segments included in the action accompanying the UK fleet report for 2016 is 25, which is 8 more than in the action plan submitted with the fleet report for 2015. 15 fleet segments are common to both of the aforementioned action plans.

The fleet segments identified for action in the fleet report for 2016 that are additional to those identified for action in the 2015 fleet report are given in Table 6.2.23.1.

Table 6.2.23.1 Additional fleet segments identified as imbalanced and included in the action plan submitted with the UK fleet report for 2016.

		Number of vessels in 2015	**% of total tonnage landed in 2015**
DFN	VL1012	8	0.2
	VL1218	7	0.4
DRB	VL0010	105	0.5
	VL1012	32	0.3
	VL1218	114	2.5
	VL2440	31	2.4
FPO	VL0010	1739	3.8
TM	VL40XX	28	49.7

Comments on Proposed Measures

The adjustment measures proposed by UK in regards to the additional segments are:

(i) Continue improvement process towards SHI being in balance through observance of TAC/Quota limits designed to bring the stocks involved to MSY, including compliance with regional multi-annual management plans and technical measures where appropriate.

(ii) Introduction of transition stage to demersal landing obligation - support increased selectivity measures.

(iii) Implement requirements as in Article 10, Council Regulation 2016/72.

(iv) Improve the state of stocks by observance of TAC limits designed to achieve MSY especially for cod stocks where there are:

- Limits on entry to fleet segment and effort restrictions;
- Incentives of gear selectivity measures, including the mandatory use of highly selective gears in some sea areas, such as the Irish Sea;
- Mandatory conservation related measures (Real Time Closures).

(v) Ancillary benefits from the Cod Recovery regime measures - e.g. conservation and gear selectivity measures; benefits from CFP reform.

(vi) Continue improvement process towards SHI being in balance through observance of TAC/Quota limits designed to bring the stocks involved to MSY, including compliance with regional multi-annual management plans and technical measures where appropriate.

(vii) Support measures in the EMFF Operational Programme are available at preferential match-funding rates, such as assistance for small-scale

fleet vessels to meet the requirements of the landing obligation, and on-board safety measures.

(viii) Continuing support for development of marketing initiatives, including new measures within the EMFF such as the establishment of a small-scale fleet Producer Organisation.

ISome of the measures previously implemented are to be continued but detailes of outcomes of such measures were not provided.

Conclusion

With the data and information provided in the fleet report for 2016 and associated action plan, the EWG 17-08 cannot determine whether the measures proposed can be considered sufficient to balance the additional imbalanced fleets.

5.3 Concluding remarks on Assessment of Proposed Measures in Action Plans

In General, while it was relatively straightforward to identify in Member States' action plans, those fleet segments that were additional to those included in the action plans submitted with their fleet reports for 2015, the information presented was only sufficient to note the actions that Member States intend to implement to address any imbalances in the fleet segments identified and was not sufficient to quantitatively assess whether such measures would be sufficient to redress any such imbalances.

Furthermore, such a quantitative assessment will not be possible unless the specific objectives of the measures proposed for each of the segments identified as being out of balance are specified by the Member State. Even in such cases, any quantitative assessment is likely to be trivial. For example, if a Member State plans to reduce a segment's capacity by 20% of GT, without a stated objective of how such a measure will redress the imbalance in that segment, the assessment could only conclude the obvious i.e. that removing 20% of GT will result in a 20% reduction in GT. To provide a more informative assessment, the Member State would need to specify what the intended measure is likely to lead to in terms of how it will redress the imbalance they have identified, and that will depend entirely on the nature of the imbalance and which indicators and other factors have been taken into account in determining the imbalance. Nevertheless, because the indicators are not metrics and the judgement as to whether a segment is in or out of balance with its fishing opportunities has to be made taking into account other factors, the potential objectives are almost limitless and in many cases will essentially be impossible to assess in any meaningful quantitative way. Furthermore, measures simply to improve an adverse indicator value will not guarantee that any imbalance, if it truly exists, will be redressed; it will simply mean that the indicator value has improved.

The expert group also considers that previous comments and criticisms on the indicators and criteria specified in the 2014 Balance Indicator Guidelines given in previous balance EWG and STECF reports remain valid and using the indicators in such a way does not necessarily indicate imbalance. Hence, it is not reasonable to expect to be able to provide an informed assessment of whether proposed measures will improve or redress any imbalances identified if despite the indicator values, no such imbalances actually exist.

6 TOR 4 – LIST OF FLEET SEGMENT OUT OF BALANCE

6.1 Introductory Remarks for TOR 4

For each supra-region tables (Tables 7.1.1-6) are presented with the list of those fleet segments that according to the 2015 values for either i) the SHI or ii) the SAR calculated by STECF are out of balance with their fishing opportunities, according to the criteria in the 2014 Balance Indicator Guidelines. . In the tables 7.1.1-6 also the fish stocks on which segments out of balance rely. The fish stocks on which a fleet segment is reliant have beendetermined by ranking the landings of value from all stocks caught by that fleet segment in descending order in terms of landings value and listing those stocks that account for 75% of the total value of the landings by that fleet segment.

Unfortunately, was not possible to carry out a comparison between SHI and SAR indicator calculated by STECF and the ones presented in the MS fleet reports mainly due to time constraints. However, the EWG 17-08 stresses that such comparison would not be appropriate taking into account that the difference that would arise are due to different fleet segmentation utilized (e.g. Italy estimates the biological indicator by GSA) as well as the use of input data for the estimation of biological indicator updated with a different time schedule.

Table 7.1.1 List of flet segment by country in Area 27 that in 2015 were out of balance according to the SHI indicator. Note that the SHI has been estimated according to 2014 Balance Indicator Guidelines (COM (2014) 545 Final), using 40% of the annual value of landings that came from assessed stocks as threshold (% of coverage).

Countries	Fleet segments	SHI	% of covarage	Major stocks
BEL	DTS-VL2440-NGI	1.16	54.75	European plaice-ple.27.420, Norway lobster-nep.fu.6, Norway lobster-nep.fu.8, Common sole-sol.27.4, Common squids nei-27.7.d, Turbot-tur.27.4, Norway lobster-nep.fu.5, Norway lobster-nep.fu.33, Surmullet-mur.27.3a47d, Common sole-sol.27.7d, Tub gurnard-27.7.d, Common sole-sol.27.7fg, Atlantic cod-cod.27.47d20, Lemon sole-lem.27.3a47d
BEL	TBB-VL2440-NGI	1.09	64.13	Common sole-sol.27.7d, European plaice-ple.27.420, Common sole-sol.27.4, Common sole-sol.27.7fg, Common sole-sol.27.8ab, Lemon sole-lem.27.3a47d, Atlantic cod-cod.27.47d20, Anglerfishes nei-mon.27.78ab, European plaice-ple.27.7d, Brill-bll.27.3a47de, Turbot-tur.27.4, Lemon sole-27.7.f, Turbot-27.7.d, Common cuttlefish-27.7.d
BEL	TBB-VL1824-NGI	1.06	54.31	Common shrimp-27.4.c, Common sole-sol.27.7d, Common sole-sol.27.4, European plaice-ple.27.7d, Great Atlantic scallop-27.7.d, European plaice-ple.27.420
DEU	TBB-VL2440-	1.08	79.26	Common sole-sol.27.4, European plaice-ple.27.420
DEU	DTS-VL2440-	1.17	87.4	Saithe(=Pollock)-pok.27.3a46, Atlantic cod-cod.27.47d20, European hake-hke.27.3a46-8abd, European plaice-ple.27.420, Haddock-had.27.46a20
DEU	DTS-VL1012-	2.29	68.98	Atlantic cod-cod.27.22-24, Atlantic herring-her.27.20-24, Common dab-dab.27.22-32, European plaice-ple.27.21-23
DEU	DFN-VL1218-	1.21	93.42	Common sole-sol.27.4, Atlantic cod-cod.27.47d20, Atlantic herring-her.27.20-24
DEU	PG-VL1012-	2.24	71.63	Atlantic herring-her.27.20-24, Atlantic cod-cod.27.22-24, European flounder-fle.27.2425
DEU	DTS-VL1218-	2.67	70.93	Atlantic cod-cod.27.22-24, Common dab-dab.27.22-32, European plaice-ple.27.21-23, Atlantic herring-her.27.20-24
DEU	DTS-VL1824-	1.5	63.93	European plaice-ple.27.420, Atlantic cod-cod.27.22-24, Common shrimp-27.4.b, Turbot-tur.27.4, Norway lobster-nep.fu.6, Norway lobster-nep.fu.8, Atlantic cod-cod.27.47d20
DEU	DTS-VL40XX-	1.16	75.97	Greenland halibut-ghl.27.561214, Atlantic cod-cod.27.1-2, Greenland halibut-21.1.c, Saithe(=Pollock)-pok.27.3a46
DEU	TM-VL40XX-	1.1	84.52	Atlantic mackerel-mac.27.nea, Atlantic herring-her.27.3a47d, Atlantic herring-her.27.1-24a514a, Blue whiting(=Poutassou)-whb.27.1-91214, European pilchard(=Sardine)-34.1.3
DNK	DTS-VL2440-NGI	1.08	70.71	Atlantic cod-cod.27.47d20, European plaice-ple.27.420, Northern prawn-pra.27.4a20, European sprat-spr.27.4, Saithe(=Pollock)-pok.27.3a46, Angler(=Monk)-anf.27.3a46, Sandeels(=Sandlances) nei-san.sa.1r, European hake-hke.27.3a46-8abd, Norway pout-nop.27.3a4, Norway pout-nop-34-

Countries	Fleet segments	SHI	% of covarage	Major stocks
				june, Lemon sole-lem.27.3a47d
DNK	DTS-VL1824-NGI	1.07	73.77	European plaice-ple.27.420, European sprat-spr.27.4, Norway lobster-nep.fu.3-4, Atlantic cod-cod.27.47d20, Sandeels(=Sandlances) nei-san.sa.1r, Atlantic cod-cod.27.22-24, European sprat-spr.27.3a, Witch flounder-wit.27.3a47d, Northern prawn-pra.27.4a20, Atlantic cod-cod.27.25-32
DNK	PMP-VL1218-NGI	1.11	68.07	European plaice-ple.27.420, Norway lobster-nep.fu.3-4, Atlantic cod-cod.27.25-32, Atlantic cod-cod.27.47d20, Atlantic cod-cod.27.22-24
DNK	PMP-VL1824-NGI	1.14	82.88	Atlantic cod-cod.27.47d20, European hake-hke.27.3a46-8abd, European plaice-ple.27.420, Northern prawn-pra.27.4a20, Turbot-tur.27.4
DNK	DTS-VL1218-NGI	1.01	79.66	Norway lobster-nep.fu.3-4, European plaice-ple.27.420, Atlantic cod-cod.27.22-24, Atlantic cod-cod.27.47d20, Atlantic cod-cod.27.25-32, Northern prawn-pra.27.4a20
DNK	PMP-VL1012-NGI	1.28	68.96	European plaice-ple.27.420, Atlantic cod-cod.27.47d20, Atlantic cod-cod.27.25-32, Atlantic cod-cod.27.22-24, Norway lobster-nep.fu.3-4, European sprat-spr.27.4, European plaice-ple.27.21-23, Lemon sole-lem.27.3a47d
DNK	PGP-VL0010-NGI	1.75	46.67	Atlantic cod-cod.27.47d20, European eel-ele.2737.nea, Atlantic cod-cod.27.22-24, Lumpfish(=Lumpsucker)-27.3.a, European plaice-ple.27.420, Common sole-sol.27.20-24, European lobster-27.4.b, Atlantic mackerel-mac.27.nea, Freshwater fishes nei-27.4.b, European flat oyster-27.4.b, European plaice-ple.27.21-23
DNK	DTS-VL0010-NGI	1.03	91.49	European plaice-ple.27.420, Atlantic cod-cod.27.47d20, Norway lobster-nep.fu.3-4
DNK	DTS-VL1012-NGI	1.51	74.2	Norway lobster-nep.fu.3-4, Atlantic cod-cod.27.22-24, Atlantic cod-cod.27.25-32, European sprat-spr.27.4, Atlantic herring-her.27.3a47d
DNK	PGP-VL1218-NGI	1.32	72.88	Atlantic cod-cod.27.47d20, European plaice-ple.27.420, Common sole-sol.27.4, Turbot-tur.27.4, Atlantic cod-cod.27.22-24
DNK	PGP-VL1012-NGI	2.09	69.84	Atlantic cod-cod.27.22-24, Atlantic cod-cod.27.47d20, European plaice-ple.27.420, European plaice-ple.27.21-23, Turbot-tur.27.22–32, Common sole-sol.27.20-24, Lemon sole-lem.27.3a47d, Lumpfish(=Lumpsucker)-27.3.a
DNK	PMP-VL0010-NGI	1.45	67.04	Atlantic cod-cod.27.22-24, Norway lobster-nep.fu.3-4, European plaice-ple.27.420, Atlantic cod-cod.27.47d20, Common sole-sol.27.20-24, European flat oyster-27.4.b, Pollack-pol.27.3a4, European lobster-27.4.b, Lumpfish(=Lumpsucker)-27.3.a
ESP	HOK-VL1012-	1.88	43.22	European hake-hke.27.8c9a, Atlantic mackerel-mac.27.nea, European seabass-bss.27.8c9a, European conger-27.8.c, Albacore-alb-na, Common octopus-27.8.c, Pollack-pol.27.89a, Common squids nei-27.8.c
ESP	DFN-VL1824-	1.39	72.36	Albacore-alb-na, European hake-hke.27.8c9a, Anglerfishes nei-mon.27.8c9a, Anglerfishes nei-ank.27.8c9a, Axillary seabream-27.8.c, Atlantic mackerel-mac.27.nea, Atlantic bonito-27.8.c
ESP	DFN-VL1218-	1.33	47.85	European hake-hke.27.8c9a, Anglerfishes nei-mon.27.8c9a, Atlantic mackerel-mac.27.nea, Anglerfishes nei-ank.27.8c9a, Albacore-alb-na, European seabass-bss.27.8c9a, Solea spp-27.8.c, Solea spp-27.9.a, Pollack-pol.27.89a, John dory-27.8.c, Meagre-27.9.a, Spinous spider crab-27.9.a, Spinous spider crab-27.8.c, Surmullet-27.8.c, Axillary seabream-27.8.c, Common octopus-27.9.a, Turbot-27.8.c, Finfishes nei-27.9.a, Common cuttlefish-27.9.a, Jack and horse mackerels nei-hom.27.9a, Finfishes nei-27.8.c
ESP	HOK-VL1218-	1.61	60.89	European hake-hke.27.8c9a, Albacore-alb-na, Atlantic mackerel-mac.27.nea, European conger-27.8.c, Pollack-pol.27.89a, European seabass-bss.27.8c9a, Blackspot(=red) seabream-sbr.27.6-8
ESP	HOK-VL1824-	1.12	77.32	Albacore-alb-na, Atlantic mackerel-mac.27.nea, European hake-hke.27.8c9a, Blackbelly rosefish-27.8.c
ESP	DTS-VL2440-	1.39	63.38	Blue whiting(=Poutassou)-whb.27.1-91214, European hake-hke.27.3a46-8abd, Megrims nei-meg.27.7b-k8abd, Anglerfishes nei-mon.27.78ab, European hake-hke.27.8c9a, Atlantic mackerel-mac.27.nea, Anglerfishes nei-ank.27.78ab, Megrims nei-ldb.27.8c9a, Jack and horse mackerels nei-hom.27.2a4a5b6a7a-ce-k8, Anglerfishes nei-mon.27.8c9a, Jack and horse mackerels nei-hom.27.9a
ESP	DFN-VL2440-	1.3	90.73	Albacore-alb-na, European hake-hke.27.8c9a, Atlantic mackerel-mac.27.nea
EST	TM-VL2440-NGI	1.02	96.02	European sprat-spr.27.22–32, Atlantic herring-her.27.25-2932
EST	TM-VL1824-NGI	1.03	99.2	European sprat-spr.27.22–32, Atlantic herring-her.27.25-2932
FIN	TM-VL2440-	1.01	97.37	Atlantic herring-her.27.3031
FRA	TBB-VL1218-	1.04	51.47	Great Atlantic scallop-27.7.d, Common sole-sol.27.7d, Common sole-sol.27.4, Common sole-sol.27.7e, European plaice-ple.27.420, Turbot-27.7.d
FRA	TBB-VL1012-	1.06	50.57	Common sole-sol.27.7d, Great Atlantic scallop-27.7.d, Atlantic mackerel-mac.27.nea
FRA	TM-VL40XX-	1.11	99.39	Atlantic mackerel-mac.27.nea, Blue whiting(=Poutassou)-whb.27.1-91214, Atlantic herring-her.27.3a47d
FRA	TM-VL1824-	1.05	50.56	European hake-hke.27.3a46-8abd, Albacore-alb-na, European anchovy-ane.27.8, European pilchard(=Sardine)-pil.27.78abd, Atlantic mackerel-mac.27.nea, Black seabream-27.7.e, European seabass-bss.27.8ab, European seabass-bss.27.4bc7ad–h

Countries	Fleet segments	SHI	% of covarage	Major stocks
FRA	DFN-VL1012-	1.2	47.88	Common sole-sol.27.7d, Common sole-sol.27.8ab, Common sole-sol.27.4, Monkfishes nei-mon.27.78ab, European seabass-bss.27.8ab, Pollack-pol.27.89a, Spinous spider crab-27.7.e, Gilthead seabream-27.8.a, Monkfishes nei-ank.27.78ab, European hake-hke.27.3a46-8abd, Atlantic cod-cod.27.47d20, Meagre-27.8.b, Gilthead seabream-27.8.b, European seabass-bss.27.4bc7ad–h, Common cuttlefish-27.8.a, Common cuttlefish-27.7.d, Great Atlantic scallop-27.7.e, White seabream-27.8.b, Turbot-27.7.d
FRA	MGP-VL2440-	1.53	42.45	Atlantic mackerel-mac.27.nea, European pilchard(=Sardine)-pil.27.78abd, Whiting-whg.27.47d, European pilchard(=Sardine)-27.4.c, Inshore squids nei-27.7.d, Atlantic cod-cod.27.47d20, Inshore squids nei-27.4.c
FRA	DFN-VL1824-	1.01	69.44	European hake-hke.27.3a46-8abd, Common sole-sol.27.8ab, Monkfishes nei-mon.27.78ab
FRA	DFN-VL1218-	1.22	44.26	Common sole-sol.27.8ab, Monkfishes nei-mon.27.78ab, European hake-hke.27.3a46-8abd, European seabass-bss.27.8ab, Monkfishes nei-ank.27.78ab, Spinous spider crab-27.7.e, Common sole-sol.27.7d, Common sole-sol.27.4, Turbot-27.7.h, Pollack-pol.27.89a, Turbot-27.7.e, Edible crab-27.7.h, Common cuttlefish-27.8.b
FRA	MGP-VL1824-	1.21	50.89	Albacore-alb-na, Atlantic mackerel-mac.27.nea, Whiting-whg.27.47d, European pilchard(=Sardine)-pil.27.78abd, Inshore squids nei-27.7.d, European anchovy-ane.27.8, Surmullet-mur.27.3a47d, Great Atlantic scallop-27.7.d, European seabass-bss.27.4bc7ad–h, Common cuttlefish-27.8.a, European hake-hke.27.3a46-8abd
GBR	DTS-VL1012-NGI	1.01	49.6	Lemon sole-27.7.e, Norway lobster-nep.fu.13, Cuttlefish, bobtail squids nei-27.7.e, Norway lobster-nep.fu.12, Norway lobster-nep.fu.6, Norway lobster-nep.fu.15, Common squids nei-27.7.e, Norway lobster-nep.fu.8, Norway lobster-nep.fu.11, Anglerfishes nei-mon.27.78ab, Norway lobster-nep.fu.5, Haddock-had.27.7b–k, Norway lobster-nep.fu.33, European seabass-bss.27.4bc7ad–h, John dory-27.7.e
GBR	DTS-VL0010-NGI	1.01	61.12	Norway lobster-nep.fu.13, Norway lobster-nep.fu.6, Norway lobster-nep.fu.8, Norway lobster-nep.fu.12, Norway lobster-nep.fu.7, Lemon sole-27.7.e, Norway lobster-nep.fu.11, Norway lobster-nep.fu.15, Common sole-sol.27.4, Cuttlefish, bobtail squids nei-27.7.e, Norway lobster-nep.fu.5, Norway lobster-nep.fu.33, Atlantic cod-cod.27.47d20, Whiting-whg.27.47d, European seabass-bss.27.4bc7ad–h, Common squids nei-27.7.e, Common sole-sol.27.7d, Great Atlantic scallop-27.7.a, Norway lobster-nep.fu.34, Common squids nei-27.4.a
GBR	PGP-VL0010-NGI	2.16	45.65	European seabass-bss.27.4bc7ad–h, Cuttlefish, bobtail squids nei-27.7.e, Atlantic mackerel-mac.27.nea, Pollack-pol.27.67, Cuttlefish, bobtail squids nei-27.7.d, European lobster-27.7.f, Clams, etc. nei-27.7.d, Atlantic cod-cod.27.7e-k, Common sole-sol.27.7e, Atlantic cod-cod.27.47d20, Blonde ray-rjh.27.7e, Common sole-sol.27.7d, European lobster-27.7.e
GBR	HOK-VL0010-NGI	2.2	44.5	European seabass-bss.27.4bc7ad–h, Great Atlantic scallop-27.6.a, Atlantic mackerel-mac.27.nea, Solen razor clams nei-27.7.a, Solen razor clams nei-27.6.a, Pollack-pol.27.67
GBR	DTS-VL2440-NGI	1.48	70.3	Haddock-had.27.46a20, Atlantic cod-cod.27.47d20, Anglerfishes nei-anf.27.3a46, Saithe(=Pollock)-pok.27.3a46, Megrims nei-meg.27.7b-k8abd, Whiting-whg.27.47d, Anglerfishes nei-mon.27.78ab, European hake-hke.27.3a46-8abd, European plaice-ple.27.420
GBR	TM-VL40XX-NGI	1.19	99.14	Atlantic mackerel-mac.27.nea
GBR	PGP-VL1012-NGI	2.85	86.18	European seabass-bss.27.4bc7ad–h
GBR	DTS-VL1824-NGI	1.15	71.48	Haddock-had.27.46a20, Anglerfishes nei-anf.27.3a46, Atlantic cod-cod.27.47d20, Norway lobster-nep.fu.15, Norway lobster-nep.fu.7, Norway lobster-nep.fu.13, Whiting-whg.27.47d, Norway lobster-nep.fu.12, Norway lobster-nep.fu.11, Norway lobster-nep.fu.6, Norway lobster-nep.fu.8, Saithe(=Pollock)-pok.27.3a46, Megrims nei-27.4.a
GBR	DFN-VL0010-NGI	1.75	57.95	Common sole-sol.27.7d, European seabass-bss.27.4bc7ad–h, Pollack-pol.27.67, Whelk-27.7.d, Atlantic cod-cod.27.47d20, Common sole-sol.27.4, Anglerfishes nei-mon.27.78ab, Cuttlefish, bobtail squids nei-27.7.d, European pilchard(=Sardine)-pil.27.78abd, Common sole-sol.27.7e, European plaice-ple.27.7d, Turbot-27.7.e, Atlantic mackerel-mac.27.nea, Thornback ray-rjc.27.3a47d
GBR	TM-VL2440-NGI	1.16	100	Atlantic mackerel-mac.27.nea
IRL	TM-VL1824-	1.13	88.66	Atlantic mackerel-mac.27.nea, Atlantic herring-her.27.irls, European sprat-spr.27.67a–cf–k, Jack and horse mackerels nei-hom.27.2a4a5b6a7a-ce-k8
IRL	TM-VL40XX-	1.26	98.34	Atlantic mackerel-mac.27.nea, Jack and horse mackerels nei-hom.27.2a4a5b6a7a-ce-k8
IRL	TBB-VL2440-	1.18	49.68	Megrims nei-meg.27.7b-k8abd, Anglerfishes nei-mon.27.78ab, Anglerfishes nei-ank.27.78ab, Atlantic cod-cod.27.7e-k, Turbot-27.7.g, Haddock-had.27.7b–k, Lemon sole-27.7.g, Blonde ray-rjh.27.7afg
IRL	TM-VL2440-	1.11	92.55	Atlantic mackerel-mac.27.nea, Albacore-alb-na, Atlantic herring-her.27.irls, Jack and horse mackerels nei-hom.27.2a4a5b6a7a-ce-k8
IRL	HOK-VL1012-	1.31	74.6	Atlantic mackerel-mac.27.nea, European lobster-27.7.b
IRL	TBB-VL1824-	1.08	47.64	Megrims nei-meg.27.7b-k8abd, Anglerfishes nei-mon.27.78ab, Blonde ray-rjh.27.7afg, Common sole-sol.27.7a, Anglerfishes nei-ank.27.78ab, Haddock-had.27.7b–k, Atlantic cod-cod.27.7e-k, Lemon sole-27.7.g, Witch flounder-

Countries	Fleet segments	SHI	% of covarage	Major stocks
				27.7.g
LTU	TM-VL2440-	1.02	64.33	European sprat-27.3.d.28, Atlantic herring-her.27.25-2932, European sprat-spr.27.22–32
LTU	TM-VL40XX-	1.02	54.19	European sprat-27.3.d.28, Atlantic herring-her.27.25-2932, European sprat-spr.27.22–32
NLD	TM-VL40XX-NGI	1.05	79.93	Atlantic mackerel-mac.27.nea, Blue whiting(=Poutassou)-whb.27.1-91214, Atlantic herring-her.27.3a47d, Atlantic horse mackerel-hom.27.2a4a5b6a7a-ce-k8, Atlantic herring-her.27.1-24a514a
NLD	DTS-VL1824-NGI	1.1	63.07	European plaice-ple.27.420, Norway lobster-nep.fu.6, Norway lobster-nep.fu.8, Turbot-tur.27.4, Common sole-sol.27.4, Norway lobster-nep.fu.5, Common shrimp-27.4.c, Norway lobster-nep.fu.33
NLD	TBB-VL2440-NGI	1.09	72.79	Common sole-sol.27.4, European plaice-ple.27.420, Turbot-tur.27.4
NLD	DFN-VL1218-NGI	1.17	58.43	Common sole-sol.27.4, Edible crab-27.4.c
NLD	PG-VL0010-NGI	2.41	75.87	European seabass-bss.27.4bc7ad–h, Common sole-sol.27.4, European lobster-27.4.c
NLD	PG-VL1012-NGI	1.35	88.05	Common sole-sol.27.4
NLD	DTS-VL2440-NGI	1.27	45.73	Surmullet-mur.27.3a47d, European plaice-ple.27.420, Atlantic mackerel-mac.27.nea, Atlantic cod-cod.27.47d20, Atlantic horse mackerel-hom.27.3a4bc7d, Tub gurnard-27.7.d, Norway lobster-nep.fu.6, European seabass-bss.27.4bc7ad–h, Norway lobster-nep.fu.8, European squid-27.7.d, Whiting-whg.27.47d, Surmullet-27.7.e, Turbot-tur.27.4
NLD	TBB-VL40XX-NGI	1.09	82	Common sole-sol.27.4, European plaice-ple.27.420
POL	TM-VL2440-	1.04	90.54	European sprat-spr.27.22–32, Atlantic herring-her.27.25-2932
POL	TM-VL1824-	1.06	79	European sprat-spr.27.22–32, Atlantic herring-her.27.25-2932
PRT	DFN-VL1824-NGI	1.61	43.14	European hake-hke.27.8c9a, John dory-27.9.a, Common octopus-27.9.a, Atlantic horse mackerel-hom.27.9a, Common sole-27.9.a, Angler(=Monk)-ank.27.8c9a, Blackbellied angler-ank.27.8c9a, Pouting(=Bib)-27.9.a, Thornback ray-rjc.27.9a
PRT	HOK-VL2440-P3	1.17	70.91	Bigeye tuna-bet-atl, Albacore-alb-na, Skipjack tuna-27.10.a
SWE	DFN-VL1012-NGI	2.53	68.3	Atlantic cod-cod.27.22-24, Atlantic cod-cod.27.25-32, Atlantic herring-her.27.20-24, Atlantic herring-her.27.3031, Atlantic mackerel-mac.27.nea
SWE	TM-VL1218-NGI	1.18	96.01	Atlantic herring-her.27.3031
SWE	DFN-VL1218-NGI	2.78	47.26	Atlantic cod-cod.27.22-24, Vendace-27.3.d.31, Atlantic cod-cod.27.25-32, Atlantic herring-her.27.3031
SWE	DTS-VL2440-NGI	1.13	91.73	Northern prawn-pra.27.4a20, Atlantic cod-cod.27.47d20, Saithe(=Pollock)-pok.27.3a46, Atlantic herring-her.27.3031, Atlantic herring-her.27.25-2932
SWE	PS-VL0010-NGI	1.31	100	Atlantic mackerel-mac.27.nea
SWE	PGP-VL0010-NGI	1.15	55.46	Atlantic mackerel-mac.27.nea, Edible crab-27.3.a, European eel-ele.2737.nea, European lobster-27.3.a, Norway lobster-nep.fu.3-4
SWE	DTS-VL1824-NGI	1.16	74.6	Northern prawn-pra.27.4a20, Norway lobster-nep.fu.3-4, Atlantic cod-cod.27.25-32, Atlantic cod-cod.27.22-24, Witch flounder-wit.27.3a47d, Atlantic cod-cod.27.47d20
SWE	PMP-VL1012-NGI	1.31	78.21	Atlantic mackerel-mac.27.nea
SWE	HOK-VL1012-NGI	1.33	63.73	Atlantic cod-cod.27.25-32, Atlantic cod-cod.27.47d20, Atlantic mackerel-mac.27.nea
SWE	PGP-VL1012-NGI	1.29	89.94	Atlantic mackerel-mac.27.nea

Table 7.1.2 List of flet segment by country in Area 37 that in 2015 were out of balance according to the SHI indicator. Note that the SHI has been estimated according to 2014 Balance Indicator Guidelines (COM (2014) 545 Final), using 40% of the annual value of landings that came from assessed stocks as threshold (% of coverage).

Countries	Fleet segments	SHI	% of covarage	Major stocks
BGR	DFN-VL1824-NGI	5.39	70	Turbot-tur-gsa29, Sea snails-SA 29
BGR	TM-VL1218-NGI	2.14	81.92	Red mullet-mut-gsa29, Sea snails-SA 29, European sprat-spr-gsa29
BGR	TM-VL0612-NGI	3.78	83.42	Turbot-tur-gsa29, Red mullet-mut-gsa29
BGR	TM-VL1824-NGI	1.62	90.05	European sprat-spr-gsa29, Red mullet-mut-gsa29
BGR	PMP-VL1824-NGI	3.56	57.76	Sea snails-SA 29, Red mullet-mut-gsa29, Mediterranean horse mackerel-hmm-gsa29, Turbot-tur-gsa29
BGR	DFN-VL0612-NGI	4.52	88.77	Turbot-tur-gsa29, Red mullet-mut-gsa29, Mediterranean horse mackerel-hmm-

Countries	Fleet segments	SHI	% of covarage	Major stocks
				gsa29
BGR	HOK-VL0006-NGI	4.33	100	Mediterranean horse mackerel-hmm-gsa29, Picked dogfish-dgs-gsa29
BGR	FPO-VL0006-NGI	4.73	100	Mediterranean horse mackerel-hmm-gsa29
BGR	PGP-VL0612-NGI	4.99	100	Mediterranean horse mackerel-hmm-gsa29
BGR	FPO-VL0612-NGI	3.5	100	Mediterranean horse mackerel-hmm-gsa29, European sprat-spr-gsa29
BGR	HOK-VL0612-NGI	4.58	96.38	Mediterranean horse mackerel-hmm-gsa29, Picked dogfish-dgs-gsa29
BGR	TM-VL2440-NGI	1.16	99.25	European sprat-spr-gsa29
BGR	DFN-VL0006-NGI	4.71	62.36	Sea snails-SA 29, Mediterranean horse mackerel-hmm-gsa29, Turbot-tur-gsa29
BGR	PS-VL0612-NGI	3.62	100	Mediterranean horse mackerel-hmm-gsa29, European sprat-spr-gsa29
BGR	DFN-VL1218-NGI	4.09	73.18	Turbot-tur-gsa29, Sea snails-SA 29, Red mullet-mut-gsa29
BGR	PS-VL0006-NGI	2.74	100	European sprat-spr-gsa29, Mediterranean horse mackerel-hmm-gsa29
ESP	DTS-VL1824-	4.54	64.08	Deep-water rose shrimp-dps-gsa06, Blue and red shrimp-ara-gsa06, Norway lobster-nep-gsa06, Blue and red shrimp-ara-gsa01, European hake-hke-gsa01_05_06_07, Angler(=Monk)-mon-gsa01_05_06_07, European hake-hke-gsa06, Blue and red shrimp-ara-gsa05, Red mullet-mut-gsa06, Common octopus-SA 6, Common cuttlefish-SA 6, Surmullets(=Red mullets) nei-SA 6, Spottail mantis squillid-SA 6, Horned octopus-SA 6, Deep-water rose shrimp-dps-gsa01, Norway lobster-SA 1, Common pandora-SA 6, Gilthead seabream-SA 6, Common octopus-SA 1, Spotted flounder-SA 6, European squid-SA 6, Blue whiting(=Poutassou)-whb-gsa06, Blackspot(=red) seabream-SA 6, Finfishes nei-SA 6, Blue and red shrimp-SA 7, Anglerfishes nei-ank-gsa06
ESP	PS-VL1824-	1.61	70.49	European anchovy-ane-gsa06, European anchovy-SA 1, European pilchard(=Sardine)-pil-gsa06, European pilchard(=Sardine)-pil-gsa06-GFCM, European pilchard(=Sardine)-pil-gsa01, European pilchard(=Sardine)-pil-gsa01-03
ESP	PGO-VL2440-	1.82	63.31	Swordfish-swo-med, Swordfish-swo-na
ESP	PS-VL1218-	1.67	63.46	European anchovy-ane-gsa06, European pilchard(=Sardine)-pil-gsa01, European pilchard(=Sardine)-pil-gsa01-03, European pilchard(=Sardine)-pil-gsa06, European pilchard(=Sardine)-pil-gsa06-GFCM, European anchovy-SA 1, Mediterranean horse mackerel-SA 1, European pilchard(=Sardine)-SA 7
ESP	PGO-VL1218-	1.73	92.98	Swordfish-swo-med
ESP	PGO-VL1824-	1.79	78.42	Swordfish-swo-med
ESP	PGO-VL0612-	1.81	94.78	Swordfish-swo-med
ESP	DTS-VL2440-	3.8	68.28	Blue and red shrimp-ara-gsa06, European hake-hke-gsa01_05_06_07, Norway lobster-nep-gsa06, European hake-hke-gsa06, Blue and red shrimp-ara-gsa01, Blue and red shrimp-SA 7, Angler(=Monk)-mon-gsa01_05_06_07, Red mullet-mut-gsa06, Blue and red shrimp-ara-gsa05, Deep-water rose shrimp-dps-gsa06, Blue whiting(=Poutassou)-whb-gsa06, Common octopus-SA 6, Common pandora-SA 6, Surmullets(=Red mullets) nei-SA 6, Horned octopus-SA 6, Greater forkbeard-SA 6, Gilthead seabream-SA 6, Norway lobster-SA 7
FRA	DFN-VL0006-	3.03	45.07	Gilthead seabream-sbg-gsa07, European seabass-bss-gsa07, European eel-SA 7, Spiny lobsters nei-SA 8, Common dentex-SA 8, Marine fishes nei-SA 7, Mugil spp-SA 7, Red scorpionfish-SA 8, Thicklip grey mullet-SA 7
FRA	PGP-VL0006-	2.89	50.74	Gilthead seabream-sbg-gsa07, European eel-SA 7, European seabass-bss-gsa07
FRA	PMP-VL1218-	6.49	73.95	European hake-hke-gsa07, European hake-hke-gsa01_05_06_07, Common sole-sol-gsa07, Octopuses, etc. nei-SA 7, Atlantic bluefin tuna-bft
FRA	PMP-VL0612-	2.76	43.16	Swordfish-swo-med, Common octopus-SA 7, European pilchard(=Sardine)-SA 7, Common sole-sol-gsa07, Common dentex-SA 8, Gilthead seabream-sbg-gsa07, Spiny lobsters nei-SA 8, Purple dye murex-SA 7
FRA	HOK-VL0006-	3.78	44.62	European seabass-bss-gsa07, Common dentex-SA 8, Sea urchins, etc. nei-SA 7, Gilthead seabream-sbg-gsa07, Groupers nei-SA 8, Tellins nei-SA 7, Red scorpionfish-SA 8
FRA	DFN-VL1218-	5.9	48.34	Common sole-sol-gsa07, Monkfishes nei-mon-gsa01_05_06_07, Purple dye murex-SA 7, European hake-hke-gsa07, European hake-hke-gsa01_05_06_07, Spiny lobsters nei-SA 8, Brill-SA 7, Common dentex-SA 8, Atlantic mackerel-SA 7, Octopuses, etc. nei-SA 7, Common spiny lobster-SA 7
FRA	HOK-VL0612-	2.43	75.1	Swordfish-swo-med, Atlantic bluefin tuna-bft, Gilthead seabream-sbg-gsa07, Common sole-sol-gsa07, Common dentex-SA 8, Blackspot(=red) seabream-SA 7
HRV	DFN-VL1218-NGI	1.39	56.28	Common sole-sol-gsa17, Turbot-SA 17
HRV	HOK-VL1218-NGI	1.16	78.17	Swordfish-swo-med, Atlantic bluefin tuna-bft
HRV	PS-VL1218-NGI	3.02	84.29	European pilchard(=Sardine)-pil-gsa17_18-GFCM, European pilchard(=Sardine)-pil-gsa17_18, European anchovy-ane-gsa17_18, European anchovy-ane-gsa17_18-GFCM
HRV	PS-VL1824-NGI	3	96.16	European pilchard(=Sardine)-pil-gsa17_18-GFCM, European pilchard(=Sardine)-pil-gsa17_18, European anchovy-ane-gsa17_18-GFCM, European anchovy-ane-

Countries	Fleet segments	SHI	% of covarage	Major stocks
				gsa17_18
HRV	DTS-VL1824-NGI	1.76	74.49	Norway lobster-nep-gsa17_18, European hake-hke-gsa17_18, Deep-water rose shrimp-dps-gsa17_18_19, Deep-water rose shrimp-dps-gsa17_18, Red mullet-mut-gsa17, Red mullet-mut-gsa17_18, Monkfishes nei-SA 17
HRV	TM-VL1218-NGI	1.92	66.79	European hake-hke-gsa17_18, Red mullet-mut-gsa17, Red mullet-mut-gsa17_18, Righteye flounders nei-SA 17, Common sole-sol-gsa17, European squid-SA 17, John dory-SA 17
HRV	PS-VL2440-NGI	3.08	97.32	European pilchard(=Sardine)-pil-gsa17_18-GFCM, European pilchard(=Sardine)-pil-gsa17_18, European anchovy-ane-gsa17_18, European anchovy-ane-gsa17_18-GFCM
HRV	FPO-VL0612-NGI	1.34	45.89	Norway lobster-nep-gsa17_18, Common octopus-SA 17
HRV	PS-VL40XX-NGI	2.9	94.3	European pilchard(=Sardine)-pil-gsa17_18, European pilchard(=Sardine)-pil-gsa17_18-GFCM, European anchovy-ane-gsa17_18, European anchovy-ane-gsa17_18-GFCM
HRV	DTS-VL0612-NGI	1.68	48.85	Norway lobster-nep-gsa17_18, European hake-hke-gsa17_18, Horned and musky octopuses-SA 17, Red mullet-mut-gsa17, Red mullet-mut-gsa17_18, European squid-SA 17, Common octopus-SA 17, Picarel-SA 17, John dory-SA 17, Common cuttlefish-SA 17
HRV	DTS-VL1218-NGI	1.69	53.98	European hake-hke-gsa17_18, Norway lobster-nep-gsa17_18, Horned and musky octopuses-SA 17, Red mullet-mut-gsa17_18, Red mullet-mut-gsa17, European squid-SA 17, John dory-SA 17, Deep-water rose shrimp-dps-gsa17_18, Deep-water rose shrimp-dps-gsa17_18_19, Common cuttlefish-SA 17
HRV	DTS-VL2440-NGI	1.71	76.26	Norway lobster-nep-gsa17_18, European hake-hke-gsa17_18, Deep-water rose shrimp-dps-gsa17_18_19, Deep-water rose shrimp-dps-gsa17_18, Monkfishes nei-SA 17
ITA	DTS-VL2440-NGI	1.92	42.75	Giant red shrimp-SA 16, Deep-water rose shrimp-dps-gsa12-13-14-15-16, Blue and red shrimp-ara-gsa15_16, Norway lobster-nep-gsa15_16, European hake-hke-gsa17_18, Norway lobster-nep-gsa17_18, European hake-hke-gsa12-13-14-15-16, Giant red shrimp-ars-gsa11
ITA	TBB-VL1824-NGI	1.4	61.43	Common sole-sol-gsa17, Common cuttlefish-SA 17
ITA	TM-VL1218-NGI	2.56	92.9	European anchovy-ane-gsa17_18-GFCM, European anchovy-ane-gsa17_18, European pilchard(=Sardine)-pil-gsa17_18, European pilchard(=Sardine)-pil-gsa17_18-GFCM
ITA	TBB-VL2440-NGI	1.36	59.52	Common sole-sol-gsa17, Purple dye murex-SA 17, Caramote prawn-SA 17, Spottail mantis squillid-mts-gsa17_18, Spottail mantis squillid-mts-gsa17
ITA	PGP-VL1218-NGI	2.39	46.51	Swordfish-swo-med, Greater amberjack-SA 11, European hake-hke-gsa19, European hake-hke-gsa09_10_11, Albacore-SA 19, Common spiny lobster-SA 11, Common dolphinfish-SA 10, Marine fishes nei-SA 9, European pilchard(=Sardine)-SA 11, Marine fishes nei-SA 10, Blackspot(=red) seabream-SA 9, Silver scabbardfish-SA 10, European hake-hke-gsa09, Atlantic bluefin tuna-bft, Atlantic bonito-SA 19, Common octopus-SA 11, Albacore-SA 10, Common sole-sol-gsa17, Transparent goby-SA 9, Common cuttlefish-SA 19, Surmullet-SA 11, Greater amberjack-SA 10, Greater amberjack-SA 9, Red scorpionfish-SA 11, Marine molluscs nei-SA 9, European hake-hke-gsa10
ITA	TM-VL1824-NGI	2.78	88.01	European anchovy-ane-gsa17_18, European anchovy-ane-gsa17_18-GFCM, European pilchard(=Sardine)-pil-gsa17_18-GFCM, European pilchard(=Sardine)-pil-gsa17_18
ITA	HOK-VL1218-NGI	2.57	67.3	Swordfish-swo-med, European hake-hke-gsa17_18, European hake-hke-gsa18, Silver scabbardfish-SA 19, Blackbelly rosefish-SA 18, Common pandora-SA 18
ITA	DTS-VL1218-NGI	2.08	51.67	Giant red shrimp-ars-gsa18_19, Norway lobster-nep-gsa17_18, European hake-hke-gsa17_18, Spottail mantis squillid-mts-gsa17_18, Common cuttlefish-SA 17, Deep-water rose shrimp-dps-gsa12-13-14-15-16, Spottail mantis squillid-mts-gsa17, Common cuttlefish-SA 18, Red mullet-mut-gsa17_18, European hake-hke-gsa18, Caramote prawn-SA 18, Red mullet-mut-gsa18, Deep-water rose shrimp-dps-gsa17_18_19, Red mullet-mut-gsa09, European hake-hke-gsa12-13-14-15-16, Caramote prawn-SA 17, Musky octopus-SA 18, European squid-SA 18, Deep-water rose shrimp-dps-gsa09_10_11, Horned octopus-SA 18, European hake-hke-gsa19, Common sole-SA 18, Surmullet-mur-gsa15_16, European squid-SA 17, Deep-water rose shrimp-dps-gsa19, European hake-hke-gsa09_10_11, Norway lobster-nep-gsa09, Horned octopus-SA 9, Spottail mantis squillid-mts-gsa18, European squid-SA 9, Common sole-sol-gsa17, Blue and red shrimp-SA 19, Musky octopus-SA 17, Giant red shrimp-ars-gsa10, Musky octopus-SA 16, Norway lobster-SA 19, Surmullet-SA 11, Deep-water rose shrimp-dps-gsa09, Red mullet-mut-gsa17, Blue and red shrimp-ara-gsa09, Caramote prawn-SA 9, Common cuttlefish-SA 9, Marine molluscs nei-SA 16, Blackbellied angler-SA 19, Deep-water rose shrimp-dps-gsa17_18, Gilthead seabream-SA 18, Musky octopus-SA 11, Deep-water rose shrimp-dps-gsa10, Red mullet-mut-gsa11, Common octopus-SA 16, Red mullet-mut-gsa19, Broadtail shortfin squid-SA 18, European hake-hke-gsa09, European seabass-SA 18
ITA	PMP-VL1218-NGI	2.21	71.31	Swordfish-swo-med, Marine fishes nei-SA 10, Common octopus-SA 10, Albacore-SA 10
ITA	TM-VL2440-NGI	2.59	92.33	European anchovy-ane-gsa17_18, European anchovy-ane-gsa17_18-GFCM, European pilchard(=Sardine)-pil-gsa17_18, European pilchard(=Sardine)-pil-gsa17_18-GFCM
ITA	DTS-VL1824-NGI	2.27	48.94	Deep-water rose shrimp-dps-gsa12-13-14-15-16, European hake-hke-gsa17_18, Norway lobster-nep-gsa17_18, European hake-hke-gsa12-13-14-15-16,

Countries	Fleet segments	SHI	% of covarage	Major stocks
				Common cuttlefish-SA 17, Horned octopus-SA 9, Caramote prawn-SA 17, Red mullet-mut-gsa09, European hake-hke-gsa09_10_11, Red mullet-mut-gsa17_18, Musky octopus-SA 17, Red mullet-mut-gsa17, Blackbellied angler-SA 17, European hake-hke-gsa09, Giant red shrimp-ars-gsa10, Deep-water rose shrimp-dps-gsa09_10_11, Common sole-sol-gsa17, Spottail mantis squillid-mts-gsa17_18, Giant red shrimp-SA 16, European squid-SA 9, Broadtail shortfin squid-SA 17, Deep-water rose shrimp-dps-gsa17_18_19, Caramote prawn-SA 9, Spottail mantis squillid-mts-gsa17, Deep-water rose shrimp-dps-gsa09, European anchovy-SA 10, Musky octopus-SA 16, Common cuttlefish-SA 16, European squid-SA 17, Blue and red shrimp-ara-gsa09, European hake-hke-gsa18, Common cuttlefish-SA 9, European squid-SA 18, Deep-water rose shrimp-dps-gsa17_18, European squid-SA 16, Surmullet-mur-gsa15_16, Spottail mantis squillid-SA 9, Broadtail shortfin squid-SA 9, Horned octopus-SA 18, Whiting-SA 17, Norway lobster-nep-gsa09, Giant red shrimp-ars-gsa18_19, Musky octopus-SA 11, Musky octopus-SA 18, Blackbellied angler-SA 18, Musky octopus-SA 9, Silver scabbardfish-SA 16, Common octopus-SA 9, Swordfish-swo-med, Alloteuthis squids nei-SA 9, Deep-water rose shrimp-dps-gsa10, Blue and red shrimp-SA 10, Giant red shrimp-ars-gsa09, Red mullet-mut-gsa10, Red mullet-mut-gsa11, Silver scabbardfish-SA 10, Caramote prawn-SA 18
ITA	HOK-VL1824-NGI	1.65	71.65	Swordfish-swo-med, Albacore-SA 19
ITA	DTS-VL0612-NGI	1.89	48.96	Spottail mantis squillid-mts-gsa17_18, Spottail mantis squillid-mts-gsa17, Common cuttlefish-SA 18, Red mullet-mut-gsa17_18, Common cuttlefish-SA 17, Caramote prawn-SA 17, Red mullet-mut-gsa18, Surmullet-mur-gsa15_16, European hake-hke-gsa17_18, Caramote prawn-SA 9, European hake-hke-gsa18, Horned octopus-SA 18, European squid-SA 18, Musky octopus-SA 18, Common cuttlefish-SA 9, Red mullet-mut-gsa17, Common sole-sol-gsa17, Silversides(=Sand smelts) nei-SA 17, Musky octopus-SA 16, Changeable nassa-SA 17, Musky octopus-SA 17, Red mullet-mut-gsa09, Spottail mantis squillid-SA 9, Spottail mantis squillid-mts-gsa18
ITA	PMP-VL0612-NGI	1.78	47.99	Swordfish-swo-med, Common dolphinfish-SA 10, Marine fishes nei-SA 10
ITA	PS-VL2440-NGI	1.79	84.57	Atlantic bluefin tuna-bft, European anchovy-ane-gsa09, European anchovy-ane-gsa17_18-GFCM, European anchovy-ane-gsa17_18
MLT	HOK-VL0612-NGI	1.62	63.21	Swordfish-swo-med, Common dolphinfish-SA 15
MLT	DTS-VL2440-NGI	3.81	57.78	Surmullet-mur-gsa15_16, Red mullet-mut-gsa15-16, Giant red shrimp-SA 15, European hake-hke-gsa12-13-14-15-16, Common pandora-SA 15
MLT	HOK-VL1218-NGI	1.55	56.79	Swordfish-swo-med, Common dolphinfish-SA 15, Atlantic bluefin tuna-bft
MLT	HOK-VL1824-NGI	1.68	68.23	Swordfish-swo-med, Silver scabbardfish-SA 15, Atlantic bluefin tuna-bft
ROU	PG-VL0006-NGI	2.69	48.73	European anchovy-ane-gsa29, Pontic shad-SA 29, Thomas' rapa whelk-SA 29, Gobies nei-SA 29
ROU	PG-VL0612-NGI	3.6	81	Turbot-tur-gsa29, European anchovy-ane-gsa29, Mediterranean horse mackerel-hmm-gsa29, European sprat-spr-gsa29
SVN	PS-VL1218-NGI	3.06	85.64	European pilchard(=Sardine)-pil-gsa17_18-GFCM, European pilchard(=Sardine)-pil-gsa17_18, European anchovy-ane-gsa17_18-GFCM, European anchovy-ane-gsa17_18

Table 7.1.3 List of fleet segment by country in OFR that in 2015 were out of balance according to the SHI indicator. Note that the SHI has been estimated according to 2014 Balance Indicator Guidelines (COM (2014) 545 Final), using 40% of the annual value of landings that came from assessed stocks as threshold (% of coverage).

Countries	Fleet segments	SHI	% of covarage	Major stocks
ESP	PMP-VL1218-	1.03	78.24	Albacore-alb-na, Bigeye tuna-bet-atl
ESP	PS-VL40XX-	1.07	69.31	Yellowfin tuna-yft-io, Bigeye tuna-bet-io, Bigeye tuna-bet-atl, Yellowfin tuna-34.3.6, Yellowfin tuna-34.4.1
ESP	PMP-VL1824-	1.06	87.67	Albacore-alb-na, Bigeye tuna-bet-atl
ESP	PMP-VL2440-	1.08	95.67	Albacore-alb-na, Bigeye tuna-bet-atl
PRT	HOK-VL2440-P2	1.13	97.74	Striped marlin-mls-io, Bigeye tuna-bet-atl
PRT	HOK-VL0010-P2	1.27	40.24	Black scabbardfish-34.1.2, Bigeye tuna-bet-atl
PRT	MGP-VL1012-P2	1.28	51.48	Bigeye tuna-bet-atl, Limpets nei-34.1.2

Table 7.1.4 List of fleet segment by country in Area 27 that in 2015 were out of balance according to the SAR indicator. Note that the SAR has been estimated according to 2014 Balance Indicator Guidelines (COM (2014) 545 Final).

Country	Fleet segment	SAR	Major stocks
BEL	TBB-VL2440-NGI	1	Common sole - sol.27.7d,European plaice - ple.27.420,Common sole - sol.27.4,Common sole - sol.27.7fg,Common sole - sol.27.8ab,Lemon sole - lem.27.3a47d,Atlantic cod - cod.27.47d20,Anglerfishes nei - mon.27.78ab,European plaice - ple.27.7d,Anglerfishes nei - ank.27.78ab,Brill - bll.27.3a47de,Turbot - tur.27.4,Lemon sole - 27.7.f
DEU	DTS-VL1012-	1	Atlantic cod - cod.27.22-24,Atlantic herring - her.27.20-24,Common dab - dab.27.22-32,European plaice - ple.27.21-23
DEU	DTS-VL1218-	1	Atlantic cod - cod.27.22-24,Common dab - dab.27.22-32,European plaice - ple.27.21-23,Atlantic herring - her.27.20-24
DEU	DTS-VL1824-	1	European plaice - ple.27.420,Norway lobster - nep.fu.33,Atlantic cod - cod.27.22-24,Common shrimp - 27.4.b,Turbot - tur.27.4
DEU	DTS-VL2440-	1	Saithe(=Pollock) - pok.27.3a46,Atlantic cod - cod.27.47d20,European hake - hke.27.3a46-8abd,European plaice - ple.27.420,Haddock - had.27.46a20
DEU	DTS-VL40XX-	2	Atlantic cod - cod.2127.1f14,Greenland halibut - ghl.27.561214,Atlantic cod - cod.27.1-2
DEU	PG-VL0010-	1	Atlantic cod - cod.27.22-24,Pike-perch - 27.3.d.24,Atlantic herring - her.27.20-24,European eel - ele.2737.nea,European perch - 27.3.d.24,Roach - 27.3.d.24
DEU	PG-VL1012-	1	Atlantic herring - her.27.20-24,Atlantic cod - cod.27.22-24,European flounder - fle.27.2425
DEU	TBB-VL2440-	1	Common sole - sol.27.4,European plaice - ple.27.420
DEU	TM-VL40XX-	2	Atlantic mackerel - mac.27.nea,Blue whiting(=Poutassou) - whb.27.1-91214,Atlantic herring - her.27.1-24a514a,Atlantic herring - her.27.3a47d,Jack and horse mackerels nei - hom.27.2a4a5b6a7a-ce-k8
DNK	DTS-VL1012-NGI	1	Norway lobster - nep.fu.3-4,Atlantic cod - cod.27.22-24,Atlantic cod - cod.27.25-32,European sprat - spr.27.4,European plaice - ple.27.21-23
DNK	DTS-VL1218-NGI	1	Norway lobster - nep.fu.3-4,European plaice - ple.27.420,Atlantic cod - cod.27.22-24,Atlantic cod - cod.27.47d20,Atlantic cod - cod.27.25-32,Northern prawn - pra.27.4a20
DNK	DTS-VL1824-NGI	3	European plaice - ple.27.420,European sprat - spr.27.4,Norway lobster - nep.fu.3-4,Atlantic cod - cod.27.47d20,Sandeels(=Sandlances) nei - san.sa.1r,Atlantic cod - cod.27.22-24,European sprat - spr.27.3a,Witch flounder - wit.27.3a47d,Northern prawn - pra.27.4a20,Atlantic cod - cod.27.25-32
DNK	DTS-VL2440-NGI	2	Atlantic cod - cod.27.47d20,European plaice - ple.27.420,Northern prawn - pra.27.4a20,European sprat - spr.27.4,Saithe(=Pollock) - pok.27.3a46,Angler(=Monk) - anf.27.3a46,Sandeels(=Sandlances) nei - san.sa.4,European hake - hke.27.3a46-8abd,Norway pout - nop.27.3a4,Norway pout - nop-34-june,Lemon sole - lem.27.3a47d
DNK	PGP-VL0010-NGI	2	Atlantic cod - cod.27.47d20,European eel - ele.2737.nea,Atlantic cod - cod.27.22-24,Lumpfish(=Lumpsucker) - 27.3.a,European plaice - ple.27.420,Common sole - sol.27.20-24,European lobster - 27.4.b,Atlantic mackerel - mac.27.nea,Freshwater fishes nei - 27.4.b,European flat oyster - 27.4.b,Atlantic salmon - sal.27.22-31
DNK	PGP-VL1012-NGI	1	Atlantic cod - cod.27.22-24,Atlantic cod - cod.27.47d20,European plaice - ple.27.420,European plaice - ple.27.21-23,Turbot - tur.27.22–32,Atlantic salmon - sal.27.22-31,Common sole - sol.27.20-24
DNK	PMP-VL0010-NGI	1	Atlantic cod - cod.27.22-24,Norway lobster - nep.fu.3-4,European plaice - ple.27.420,Atlantic cod - cod.27.47d20,Common sole - sol.27.20-24,European flat oyster - 27.4.b,Pollack - pol.27.3a4,European lobster - 27.4.b,Lumpfish(=Lumpsucker) - 27.3.a
DNK	TBB-VL1824-NGI	1	Common shrimp - 27.4.b,European plaice - ple.27.420
DNK	TM-VL40XX-NGI	1	Atlantic mackerel - mac.27.nea,Atlantic herring - her.27.1-24a514a,European sprat - spr.27.4,Atlantic herring - her.27.3a47d,Blue whiting(=Poutassou) - whb.27.1-91214
ESP	DFN-VL1218-	2	European hake - hke.27.8c9a,Anglerfishes nei - mon.27.8c9a,Atlantic mackerel - mac.27.nea,Anglerfishes nei - ank.27.8c9a,Albacore - alb-na,European seabass - bss.27.8c9a,Solea spp - 27.8.c,Solea spp - 27.9.a,Pollack - pol.27.89a,John dory - 27.8.c,Meagre - 27.9.a,Spinous spider crab - 27.9.a,Spinous spider crab - 27.8.c,Surmullet - 27.8.c,Axillary seabream - 27.8.c,Common octopus - 27.9.a,Turbot - 27.8.c,Finfishes nei - 27.9.a,Common cuttlefish - 27.9.a,Jack and horse mackerels nei - hom.27.9a,Finfishes nei - 27.8.c
ESP	DFN-VL1824-	1	Albacore - alb-na,European hake - hke.27.8c9a,Anglerfishes nei - mon.27.8c9a,Anglerfishes nei - ank.27.8c9a,Axillary seabream - 27.8.c,Atlantic mackerel - mac.27.nea,Atlantic bonito - 27.8.c
ESP	DTS-VL1218-	2	Common cuttlefish - 27.9.a,European squid - 27.9.a,Spottail mantis squillid - 27.9.a,Common octopus - 27.9.a,Alloteuthis squids nei - 27.9.a,Caramote prawn - 27.9.a,Deep-water rose shrimp - 27.9.a,Chub mackerel - 27.9.a,European hake - hke.27.8c9a,Common squids nei - 27.9.a,Wedge sole - 27.9.a,European common squid - 27.9.a,Meagre - 27.9.a,Finfishes nei - 27.9.a,Musky octopus - 27.9.a,Microchirus azevia - 27.9.a
ESP	DTS-VL1824-	3	Deep-water rose shrimp - 27.9.a,Chub mackerel - 27.9.a,European hake - hke.27.8c9a,Common octopus - 27.9.a,Common cuttlefish - 27.9.a,Blue whiting(=Poutassou) - whb.27.1-91214,European squid - 27.9.a,Caramote prawn - 27.9.a,Spottail mantis squillid - 27.9.a,Alloteuthis squids nei - 27.9.a,Common squids nei - 27.9.a,Wedge sole - 27.9.a,Norway lobster - nep.fu.30,Horned octopus - 27.9.a,Jack and horse mackerels nei - hom.27.9a,Solea spp - 27.9.a,Finfishes nei - 27.9.a,Spotted flounder - 27.9.a,Microchirus azevia - 27.9.a,Surmullet - 27.9.a
ESP	DTS-VL2440-	5	Megrims nei - meg.27.7b-k8abd,Anglerfishes nei - mon.27.78ab,European hake - hke.27.3a46-8abd,Blue whiting(=Poutassou) - whb.27.1-91214,Anglerfishes nei - ank.27.78ab,European hake - hke.27.8c9a,Atlantic mackerel - mac.27.nea
ESP	DTS-VL40XX-	2	Atlantic cod - cod.27.1-2,Atlantic cod - cod.27.1-2coast,Beaked redfish - reb.27.1-2,Greenland halibut - 21.3.l
ESP	PGP-VL2440-	2	European hake - hke.27.3a46-8abd

Country	Fleet segment	SAR	Major stocks
ESP	PMP-VL0010-	1	Common octopus - 27.9.a,Barnacle - 27.8.c,Common octopus - 27.8.c,European seabass - bss.27.8c9a,Common cuttlefish - 27.9.a,Barnacle - 27.9.a,Stony sea urchin - 27.9.a,Common prawn - 27.9.a,Meagre - 27.9.a,Atlantic mackerel - mac.27.nea,Spinous spider crab - 27.9.a,Stony sea urchin - 27.8.c,European conger - 27.8.c,Velvet swimcrab - 27.9.a,Pullet carpet shell - 27.9.a,Spinous spider crab - 27.8.c,Solea spp - 27.9.a,Common cuttlefish - 27.8.c,European hake - hke.27.8c9a,Velvet swimcrab - 27.8.c,Caramote prawn - 27.9.a,Pullet carpet shell - 27.8.c,Red porgy - 27.9.a,Pod razor shell - 27.9.a,Rubberlip grunt - 27.9.a,Wedge sole - 27.9.a,Common prawn - 27.8.c,Purple dye murex - 27.9.a,White seabream - 27.8.c
ESP	PS-VL1012-	1	Chub mackerel - 27.9.a,Jack and horse mackerels nei - hom.27.9a,European pilchard(=Sardine) - pil.27.8c9a,Jack and horse mackerels nei - hom.27.2a4a5b6a7a-ce-k8,Chub mackerel - 27.8.c,European seabass - bss.27.8c9a,European anchovy - ane.27.9a
ESP	PS-VL0010-	1	European pilchard(=Sardine) - pil.27.8c9a,White seabream - 27.8.c,Chub mackerel - 27.8.c
ESP	PS-VL1218-	2	European anchovy - ane.27.9a,European pilchard(=Sardine) - pil.27.8c9a,Chub mackerel - 27.9.a,Jack and horse mackerels nei - hom.27.9a,Chub mackerel - 27.8.c
FIN	PG-VL0010-	1	Whitefishes nei - 27.3.d.31,Whitefishes nei - 27.3.d.30,European perch - 27.3.d.30,Atlantic herring - her.27.3031,Pike-perch - 27.3.d.29,Atlantic salmon - sal.27.22-31,Pike-perch - 27.3.d.32,Pike-perch - 27.3.d.30,Whitefishes nei - 27.3.d.29,European perch - 27.3.d.29,Vendace - 27.3.d.31,European perch - 27.3.d.31
FRA	DFN-VL0010-	2	Common sole - sol.27.8ab,European seabass - bss.27.8ab,Meagre - 27.8.b,Common sole - sol.27.7d,Surmullet - 27.8.a,European seabass - bss.27.4bc7ad–h,Gilthead seabream - 27.8.b,Monkfishes nei - mon.27.78ab,Gilthead seabream - 27.8.a,European lobster - 27.7.e,Common cuttlefish - 27.8.a,Pollack - pol.27.89a,Monkfishes nei - ank.27.78ab,Common sole - sol.27.7e,Common prawn - 27.8.a,Turbot - 27.7.d,Smooth-hounds nei - sdv.27.nea,Atlantic cod - cod.27.47d20,Surmullet - 27.7.e,Sand steenbras - 27.8.b,Spinous spider crab - 27.8.a,European hake - hke.27.3a46-8abd,White seabream - 27.8.b,Spinous spider crab - 27.7.e,Common sole - sol.27.4,Common cuttlefish - 27.8.b,Whelk - 27.7.d,Gilthead seabream - 27.7.e,Atlantic bonito - 27.8.b,Thicklip grey mullet - 27.8.a,Whelk - 27.7.e,Spotted seabass - 27.8.b,European lobster - 27.8.a,Atlantic mackerel - mac.27.nea,Common cuttlefish - 27.7.d,Common cuttlefish - 27.7.e
FRA	DFN-VL1012-	5	Common sole - sol.27.7d,Common sole - sol.27.8ab,Common sole - sol.27.4,European seabass - bss.27.8ab,Monkfishes nei - mon.27.78ab,Monkfishes nei - ank.27.78ab,Pollack - pol.27.89a,Spinous spider crab - 27.7.e,Gilthead seabream - 27.8.a,European hake - hke.27.3a46-8abd,Atlantic cod - cod.27.47d20,Meagre - 27.8.b,Gilthead seabream - 27.8.b,European seabass - bss.27.4bc7ad–h,Common cuttlefish - 27.8.a,Common cuttlefish - 27.7.d,Great Atlantic scallop - 27.7.e,White seabream - 27.8.b
FRA	DFN-VL1824-	1	European hake - hke.27.3a46-8abd,Common sole - sol.27.8ab,Monkfishes nei - mon.27.78ab
FRA	DRB-VL1012-	1	Great Atlantic scallop - 27.7.d,Great Atlantic scallop - 27.7.e,Common sole - sol.27.7d,Blue mussel - 27.8.a,Common edible cockle - 27.8.a,Surmullet - mur.27.3a47d,Banded carpet shell - 27.7.e
FRA	DRB-VL1218-	1	Great Atlantic scallop - 27.7.d,Common sole - sol.27.7d,Great Atlantic scallop - 27.7.e
FRA	DTS-VL1012-	1	Great Atlantic scallop - 27.7.e,Norway lobster - nep.fu.2324,Great Atlantic scallop - 27.7.d,Common cuttlefish - 27.8.a,Common sole - sol.27.8ab,Inshore squids nei - 27.8.a,Common sole - sol.27.7d,Atlantic mackerel - mac.27.nea,Common cuttlefish - 27.7.e,Wedge sole - 27.8.b,European seabass - bss.27.8ab,Inshore squids nei - 27.8.b,European hake - hke.27.3a46-8abd,Great Atlantic scallop - 27.8.a,Common sole - sol.27.7e,Common cuttlefish - 27.8.b,Whiting - whg.27.89a,Blue mussel - 27.7.d
FRA	DTS-VL1824-	1	Monkfishes nei - mon.27.78ab,Monkfishes nei - ank.27.78ab,Megrim - meg.27.7b-k8abd,Haddock - had.27.7b–k,Norway lobster - nep.fu.2324,Inshore squids nei - 27.7.d,Whiting - whg.27.7b-ce-k,Atlantic cod - cod.27.7e-k,European hake - hke.27.3a46-8abd,European seabass - bss.27.4bc7ad–h,Inshore squids nei - 27.8.a,Cuckoo ray - rjn.27.67,Atlantic mackerel - mac.27.nea,Whiting - whg.27.47d,Common cuttlefish - 27.8.a,European seabass - bss.27.8ab,Common cuttlefish - 27.7.e,Inshore squids nei - 27.7.e,Albacore - alb-na,John dory - 27.7.e,John dory - 27.7.h,Common cuttlefish - 27.7.d,Common sole - sol.27.8ab,John dory - 27.8.a,Norway lobster - nep.fu.19,Surmullet - mur.27.3a47d
FRA	DTS-VL2440-	1	Monkfishes nei - mon.27.78ab,Megrims nei - meg.27.7b-k8abd,European hake - hke.27.3a46-8abd,Monkfishes nei - ank.27.78ab,Haddock - had.27.7b–k,Whiting - whg.27.7b-ce-k,Atlantic cod - cod.27.7e-k,Monkfishes nei - anf.27.3a46,John dory - 27.7.e,John dory - 27.7.h
FRA	DTS-VL40XX-	6	Atlantic cod - cod.27.1-2,Saithe(=Pollock) - pok.27.3a46,Atlantic cod - cod.27.1-2coast,Black scabbardfish - bsf.27.nea
FRA	MGP-VL1012-	1	Great Atlantic scallop - 27.7.d,European pilchard(=Sardine) - pil.27.78abd,Atlantic mackerel - mac.27.nea,Common sole - sol.27.7d,Great Atlantic scallop - 27.8.a,Inshore squids nei - 27.8.a,Great Atlantic scallop - 27.7.e,Common sole - sol.27.8ab
FRA	PS-VL1824-	1	European pilchard(=Sardine) - pil.27.78abd,Sand steenbras - 27.8.b,Atlantic bluefin tuna - bft,Atlantic horse mackerel - hom.27.2a4a5b6a7a-ce-k8,European anchovy - ane.27.8,Gilthead seabream - 27.8.b,European seabass - bss.27.4bc7ad–h
GBR	DTS-VL1218-NGI	1	Norway lobster - nep.fu.11,Norway lobster - nep.fu.33,Norway lobster - nep.fu.19,Anglerfishes nei - anf.27.3a46,Cuttlefish, bobtail squids nei - 27.7.e,Norway lobster - nep.fu.9,Lemon sole - 27.7.e
GBR	DTS-VL1824-NGI	3	Anglerfishes nei - anf.27.3a46,Haddock - had.27.46a20,Norway lobster - nep.fu.11,Norway lobster - nep.fu.19,Atlantic cod - cod.27.47d20,Norway lobster - nep.fu.9,Norway lobster - nep.fu.33,Whiting - whg.27.47d
GBR	DTS-VL2440-NGI	5	Haddock - had.27.46a20,Atlantic cod - cod.27.47d20,Megrims nei - meg.27.7b-k8abd,Anglerfishes nei - mon.27.78ab,Anglerfishes nei - anf.27.3a46,European hake - hke.27.3a46-8abd,Haddock - had.27.6b,Saithe(=Pollock) - pok.27.3a46,Anglerfishes nei - ank.27.78ab,Whiting - whg.27.47d
GBR	DTS-VL40XX-NGI	4	Atlantic cod - cod.27.1-2,Atlantic cod - cod.2127.1f14,Atlantic cod - cod.27.1-2coast
GBR	TBB-VL1824-NGI	1	Cuttlefish, bobtail squids nei - 27.7.e,Common sole - sol.27.7e,Anglerfishes nei - mon.27.78ab,Turbot - 27.7.e,Anglerfishes nei - ank.27.78ab,Lemon sole - 27.7.e,European plaice - ple.27.7e,Great Atlantic scallop - 27.7.e

Country	Fleet segment	SAR	Major stocks
GBR	TBB-VL2440-NGI	1	Anglerfishes nei - mon.27.78ab,Cuttlefish, bobtail squids nei - 27.7.e,Megrims nei - meg.27.7b-k8abd,Common sole - sol.27.7e,European plaice - ple.27.420,Common sole - sol.27.4,Anglerfishes nei - ank.27.78ab,Great Atlantic scallop - 27.7.e,Cuttlefish, bobtail squids nei - 27.7.h,Turbot - 27.7.e
GBR	TM-VL40XX-NGI	1	Atlantic mackerel - mac.27.nea,Atlantic herring - her.27.3a47d
IRL	DTS-VL1012-	1	Norway lobster - nep.fu.16,Norway lobster - nep.fu.19,Norway lobster - nep.fu.2021,Angler(=Monk) - mon.27.78ab,Anglerfishes nei - ank.27.78ab,Megrims nei - meg.27.7b-k8abd,Common sole - sol.27.7h–k,Whiting - whg.27.7b-ce-k
IRL	DTS-VL1218-	1	Norway lobster - nep.fu.19,Norway lobster - nep.fu.16,Anglerfishes nei - ank.27.78ab,Anglerfishes nei - mon.27.78ab,Megrims nei - meg.27.7b-k8abd,Common sole - sol.27.7h–k,Norway lobster - nep.fu.22,Norway lobster - nep.fu.15,Whiting - whg.27.7b-ce-k,Haddock - had.27.7b–k
IRL	DTS-VL1824-	3	Norway lobster - nep.fu.19,Norway lobster - nep.fu.16,Norway lobster - nep.fu.15,Anglerfishes nei - mon.27.78ab,Whiting - whg.27.7b-ce-k,Megrims nei - meg.27.7b-k8abd,European hake - hke.27.3a46-8abd,Norway lobster - nep.fu.2021,Atlantic mackerel - mac.27.nea,Anglerfishes nei - ank.27.78ab
IRL	DTS-VL2440-	3	Norway lobster - nep.fu.16,Norway lobster - nep.fu.22,Norway lobster - nep.fu.2021,Whiting - whg.27.7b-ce-k,European hake - hke.27.3a46-8abd,Anglerfishes nei - mon.27.78ab,Megrims nei - meg.27.7b-k8abd,Megrims nei - lez.27.6b,Anglerfishes nei - ank.27.78ab,Norway lobster - nep.fu.19
IRL	TBB-VL2440-	1	Megrims nei - meg.27.7b-k8abd,Anglerfishes nei - mon.27.78ab,Anglerfishes nei - ank.27.78ab,Atlantic cod - cod.27.7e-k,Turbot - 27.7.g,Haddock - had.27.7b–k,Lemon sole - 27.7.g,Blonde ray - rjh.27.7afg
IRL	TBB-VL1824-	1	Megrims nei - meg.27.7b-k8abd,Anglerfishes nei - ank.27.78ab,Blonde ray - rjh.27.7afg,Common sole - sol.27.7a,Haddock - had.27.7b–k,Atlantic cod - cod.27.7e-k,Lemon sole - 27.7.g,Witch flounder - 27.7.g
IRL	TM-VL40XX-	1	Atlantic mackerel - mac.27.nea,Blue whiting(=Poutassou) - whb.27.1-91214
NLD	TM-VL40XX-NGI	1	Atlantic mackerel - mac.27.nea,Blue whiting(=Poutassou) - whb.27.1-91214,Atlantic horse mackerel - hom.27.2a4a5b6a7a-ce-k8,Atlantic herring - her.27.3a47d,Atlantic herring - her.27.1-24a514a
POL	DTS-VL40XX-	3	Landings value not available for this fs
PRT	DFN-VL1218-NGI	1	Common octopus - 27.9.a,European hake - hke.27.8c9a,Common sole - 27.9.a,Angler(=Monk) - ank.27.8c9a,John dory - 27.9.a,Pouting(=Bib) - 27.9.a,Common cuttlefish - 27.9.a,Atlantic horse mackerel - hom.27.9a,Thornback ray - rjc.27.9a,European seabass - bss.27.8c9a,Axillary seabream - 27.9.a,Solea spp - 27.9.a,Surmullet - 27.9.a,Turbot - 27.9.a,Thickback sole - 27.9.a
PRT	DTS-VL1824-NGI	1	Deep-water rose shrimp - 27.9.a,Norway lobster - nep.fu.30,Scarlet shrimp - 27.9.a
PRT	DTS-VL2440-NGI	1	Jack and horse mackerels nei - hom.27.9a,Atlantic mackerel - mac.27.nea,Deep-water rose shrimp - 27.9.a,European hake - hke.27.8c9a,Blue whiting(=Poutassou) - whb.27.1-91214,Norway lobster - nep.fu.30,Atlantic horse mackerel - hom.27.2a4a5b6a7a-ce-k8,European squid - 27.9.a,Axillary seabream - 27.9.a
PRT	HOK-VL0010-NGI	1	European seabass - bss.27.8c9a,Common octopus - 27.9.a,Gilthead seabream - 27.9.a,Common cuttlefish - 27.9.a,Meagre - 27.9.a,Red porgy - 27.9.a,European squid - 27.9.a,European conger - 27.9.a
PRT	HOK-VL1012-P3	1	Blackspot(=red) seabream - sbr.27.10,Veined squid - 27.10.a,Silver scabbardfish - 27.10.a,Bigeye tuna - bet-atl,Blackbelly rosefish - 27.10.a,European conger - 27.10.a
PRT	HOK-VL2440-P3	1	Bigeye tuna - bet-atl,Albacore - alb-na,Blackspot(=red) seabream - sbr.27.10
PRT	PGP-VL0010-NGI	3	Common octopus - 27.9.a,Common cuttlefish - 27.9.a,Common edible cockle - 27.9.a,European seabass - bss.27.8c9a,Meagre - 27.9.a,Gilthead seabream - 27.9.a,White seabream - 27.9.a,Common sole - 27.9.a,Surmullet - 27.9.a,European conger - 27.9.a,Pouting(=Bib) - 27.9.a
SWE	DFN-VL0010-NGI	1	Atlantic cod - cod.27.22-24,Atlantic cod - cod.27.25-32,Atlantic herring - her.27.3031,Atlantic cod - cod.27.47d20,European eel - ele.2737.nea,Whitefishes nei - 27.3.d.31,Atlantic salmon - sal.27.22-31,European perch - 27.3.d.30,Whitefishes nei - 27.3.d.30,Atlantic mackerel - mac.27.nea,European perch - 27.3.d.27,Northern pike - 27.3.d.25,Atlantic herring - her.27.25-2932,Pike-perch - 27.3.d.29,European lobster - 27.3.a
SWE	FPO-VL0010-NGI	1	Norway lobster - nep.fu.3-4,European eel - ele.2737.nea,European lobster - 27.3.a,Prussian carp - 27.3.a,Atlantic salmon - sal.27.22-31
SWE	DFN-VL1012-NGI	1	Atlantic cod - cod.27.22-24,Atlantic cod - cod.27.25-32,Atlantic herring - her.27.20-24,Atlantic herring - her.27.3031,Atlantic mackerel - mac.27.nea
SWE	DFN-VL1218-NGI	1	Atlantic cod - cod.27.22-24,Vendace - 27.3.d.31,Atlantic cod - cod.27.25-32,Atlantic herring - her.27.3031

Table 7.1.5 List of fleet segment by country in Area 27 that in 2015 were out of balance according to the SAR indicator. Note that the SAR has been estimated according to 2014 Balance Indicator Guidelines (COM (2014) 545 Final).

Country	Fleet segment	SAR	Major stocks
BGR	DFN-VL0612-NGI	1	Turbot - tur-gsa29,Red mullet - mut-gsa29,Mediterranean horse mackerel - hmm-gsa29
BGR	DFN-VL1824-NGI	1	Turbot - tur-gsa29,Sea snails - sa 29
BGR	HOK-VL0006-NGI	1	Mediterranean horse mackerel - hmm-gsa29,Picked dogfish - dgs-gsa29
BGR	HOK-VL0612-NGI	1	Mediterranean horse mackerel - hmm-gsa29,Picked dogfish - dgs-gsa29
BGR	PMP-VL1218-NGI	2	Sea snails - sa 29,Red mullet - mut-gsa29
BGR	TM-VL1218-NGI	2	Red mullet - mut-gsa29,Sea snails - sa 29,European sprat - spr-gsa29
ESP	DFN-VL0612-	1	Common cuttlefish - sa 6,Finfishes nei - sa 6,Gilthead seabream - sa 6,Common octopus - sa 6,Common pandora - sa 6,Caramote prawn - sa 6,Common sole - sa 6,Common spiny lobster - sa 5,Common dentex - sa 6,Atlantic bonito - sa 6,Surmullets(=Red mullets) nei - sa 6,Greater amberjack - sa 1,European hake - hke-gsa01_05_06_07,Common spiny lobster - sa 6,Surmullet - sa 6,Greater amberjack - sa 6,European hake - hke-gsa06,White seabream - sa 6,Dentex nei - sa 1,Sand steenbras - sa 6,Marine fishes nei - sa 1
ROU	PG-VL0612-NGI	1	Turbot - tur-gsa29,European anchovy - ane-gsa29,Mediterranean horse mackerel - hmm-gsa29,European sprat - spr-gsa29

Table 7.1.6 List of fleet segment by country in OFR that in 2015 were out of balance according to the SAR indicator. Note that the SAR has been estimated according to 2014 Balance Indicator Guidelines (COM (2014) 545 Final).

Country	Fleet segment	SAR	Major stocks
FRA	HOK-VL0010-	1	Swordfish - swo-io,Yellowfin tuna - yft-io,Albacore - alb-io,Common dolphinfish - 51.6,Blue marlin - bum-io
LTU	TM-VL40XX-	1	Jack and horse mackerels nei - hom.27.2a4a5b6a7a-ce-k8,Atlantic horse mackerel - 47.1.3,Chilean jack mackerel - 87.3.3,Beaked redfish - reb.2127.sp,Atlantic horse mackerel - 34.1.3.1,Atlantic horse mackerel - 34.1.3.2,Chub mackerel - 34.1.3.1
LTU	DTS-VL2440-	1	Northern prawn - pra.27.1-2

7 CONTACT DETAILS OF EWG 17-08 PARTICIPANTS

Information on STECF members and invited experts' affiliations is displayed for information only. In any case, Members of the STECF, invited experts, and JRC experts shall act independently. In the context of the STECF work, the committee members and other experts do not represent the institutions/bodies they are affiliated to in their daily jobs. STECF members and experts also declare at each meeting of the STECF and of its Expert Working Groups any specific interest which might be considered prejudicial to their independence in relation to specific items on the agenda. These declarations are displayed on the public meeting's website if experts explicitly authorized the JRC to do so in accordance with EU legislation on the protection of personnel data. For more information: http://stecf.jrc.ec.europa.eu/adm-declarations

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8 LIST OF ANNEXES

Electronic annexes are published on the meeting's web site on:
https://stecf.jrc.ec.europa.eu/ewg1708

List of electronic annexes documents:

1. EWG—17-08– Balance Capacity Tables

9 LIST OF BACKGROUND DOCUMENTS

Background documents are published on the meeting's web site on:
https://stecf.jrc.ec.europa.eu/ewg1708

List of background documents:

1. EWG-17-08 – Doc 1 - Declarations of invited and JRC experts (see also section 7 of this report – List of participants)
2. COM(2014) 545 final – Doc 2 - Guidelines for the analysis of the balance between fishing capacity and fishing opportunities according to Art 22 of Regulation (EU) No 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy.

The following STECF reports used as background documents can be found on:
http://stecf.jrc.ec.europa.eu/reports/balance

1. 2016-10_STECF 16-09 - Balance capacity_XXXXXXX.pdf
2. 2015-10_STECF 15-15 - Balance capacity_JRC97991.pdf
3. 2015-10_EWG 15-17 - SHI supplementary data.xlsx
4. 2015-10_EWG 15-17 - Balance Indicators by Fleet Segments.xlsx
5. 2015-02_STECF 15-02 - Balance capacity_JRC94933.pdf
6. 2015-02_STECF 15-02 - Balance capacity all tables.xlsx
7. 2014-06_STECF 14-09 - Balance indicators_JRC90403.pdf
8. 2014-06_STECF 14-09 - Balance indicators_all tables_JRC90403.zip
9. 2013-11_STECF 13-28 - Balance capacity_JRC86350.pdf
10. 2013-04_STECF 13-08 - Balance indicators_JRC81659.pdf
11. 2012-11_STECF 12-18 Balance capacity_ JRC76704.pdf
12. 2011-11_STECF11-17- Balance capacity and fishing opportunities_JRC67795.pdf
13. 10-09_SG-BRE 10-01 - Fleet capacity and fishing opportunities _JRC61983.pdf

10 ANNEX I - SUMMARY OF INDICATOR ISSUES AND ASSOCIATED COMMENTS AND PROPOSALS EVIDENCED IN THE EWG 16-09

Sustainable Harvest Indicator (SHI)	Issues	Comments
Sustainable harvest indicator (SHI)	1. The indicator guidelines state that an SHI value above one could be an indication of imbalance if it has occurred for three consecutive years. This criterion may be interpreted as not being in line with the CFP, where it is stated: "*The maximum sustainable yield exploitation rate shall be achieved by 2015 where possible and, on a progressive, incremental basis at the latest by 2020 for all stocks*." Therefore, before 2020 an SHI indicator above 1 may reflect the outcome of political decisions to reach F_{MSY} not immediately, but by 2020.	1. Issue cannot be addressed without changing the guidelines. EWG 16-09 reaffirms the need for a dedicated EWG to revise indicator guidelines.
	2. Proposals for fishery management plans in the ICES area are currently taking into account F_{MSY} ranges; it is thus likely that F_{MSY} ranges which will serve as the basis for future management. SHI calculations are at present based on point estimates of F_{MSY}. SHI calculations could in future be revised to reflect the use of F_{MSY} ranges in management plans, a scenario for which the guidelines state: '*Where Fmsy is defined as a range, exceeding the upper end of the range is*	2. EWG 16-09 indicator preparatory meeting looked into this issue and concluded that F_{MSY} ranges had not been adopted as the basis for management for any stocks in the ICES area by the 30th June 2016 (the cut-off date for the inclusion of new data the EWG 16-09 indicator preparatory meeting worked with).

	interpreted as "overfishing"'. It follows that if F_{MSY} ranges instead of point estimates are used, this will have a substantial impact on SHI values because the upper limit of the F_{MSY} range is often considerably higher than the F_{MSY} point estimate.	
	3. The SHI may deliver a value of more than 1 for fleet segments which are not overcapacity with regards to their short term legally permitted harvest opportunities, i.e. fishing opportunities based on short term TACs.	3. Issue cannot be addressed without changing guidelines EWG 16-09 reaffirms the need for a dedicated EWG to revise indicator guidelines.
	4. The SHI, used in isolation to assess whether a particular fleet segment is in balance with its fishing opportunities could be misleading because it does not provide results about the extent to which a fleet segment relied on over-harvested stocks and secondly, does not provide any indication as to the overall contribution a fleet segment makes to the overall catch from an over-harvested stock.	4. Issue considered in STECF 15-15 (section 3.8 – 'Proposed Biological Indicators and Evaluation Tool'); STECF 15-15 proposal cannot be implemented without changing guidelines. EWG 16-09 reaffirms the need for a dedicated EWG to revise indicator guidelines.
	5. The SHI may deliver a value of less than 1 for fleet segments which partly rely on individual stocks harvested at rates above F_{MSY}.	5. Issue considered in STECF 15-15 (section 3.8 – 'Proposed Biological Indicators and Evaluation Tool'); STECF 15-15 proposal cannot be implemented without changing guidelines. EWG 16-09 reaffirms the need for a dedicated EWG to revise indicator guidelines.
	6. The SHI may flag problems with a certain fleet segment despite the fact that the main problem lies with another fleet segment, which in turn may not necessarily be flagged.	6. Issue considered in STECF 15-15 (section 3.8 – 'Proposed Biological Indicators and Evaluation Tool'); STECF 15-15 proposal cannot be implemented without changing guidelines. EWG 16-09 reaffirms the need for

		a dedicated EWG to revise indicator guidelines.
	7. SHI values calculated for different fleet segments may not be comparable. Small vessels in particular frequently harvest only a low number of stocks, leading to a high SHI when one of these stocks is overharvested. Fleet segments with larger vessels on the other hand generally fish more stocks in different areas. Therefore, their SHI is less sensitive to the overexploitation of particular stocks, and problems may be masked.	7. Issue considered in STECF 15-15 (section 3.8 – 'Proposed Biological Indicators and Evaluation Tool'); STECF 15-15 proposal cannot be implemented without changing guidelines. EWG 16-09 reaffirms the need for a dedicated EWG to revise indicator guidelines.
Stocks at Risk (SAR)	1. According to the 2014 indicator guidelines (COM(2014) 545 final), 'if a fleet segment takes more than 10% of its catches from a stock which is at risk, this could be treated as an indicator of imbalance'. The Expert Group considers that this is not necessarily true, but it can be used to indicate that a fleet segment may be worthy of further investigation to determine whether it is not in balance with its fishing opportunities.	1. Issue cannot be addressed without changing guidelines EWG 16-09 reaffirms the need for a dedicated EWG to revise indicator guidelines.
	2. The indicator guidelines state that B_{lim} should be taken as threshold below which stocks are counted as stocks at risk. The definition in the CFP in Article 4 (18) for "inside safe biological limits" is: "*Stock within safe biological limits' means a stock with a high probability that its estimated spawning biomass at the end of the previous year is higher than the limit biomass reference point (B_{lim})*". However, to monitor the performance	2. Issue cannot be addressed without changing guidelines. EWG 16-09 reaffirms the need for a dedicated EWG to revise indicator guidelines.

	of the common fisheries policy (see Article 50 of 1380/2013) the Commission has defined "outside safe biological limits" as SSB less than B_{pa} (where B_{pa} is defined), OR F is greater than F_{pa} (where F_{pa} is defined)8. To take the deterministic or median assessment values for SSB and contrast them with the Blim reference point may be inconsistent with the criteria of "high probability" and the definition used to monitor the CFP. B_{pa} could be seen as more appropriate threshold since B_{pa} is the SSB that gives a high probability to be above B_{lim} given the uncertainties in stock assessments in the terminal year.	
	3. The current 10% threshold is arbitrary and has not been tested. A sensitivity analysis, using different percentage thresholds as a cut-off point in order to investigate the impact of different thresholds needs to be undertaken. In addition, currently only landings from EU fleets are used to calculate whether the landings of a certain fleet segment comprise more than 10% of the overall landings. The impact of EU fleets on stocks that are shared with non-EU countries may therefore be overestimated.	3. The EWG 16-09 indicator preparatory meeting discussed the possibility of testing threshold using new R code, and providing EWG 16-09 SAR indicators based on e.g. 3 different thresholds. Ultimately this issue can only be addressed by changing the guidelines. EWG 16-09 supports the proposal for a database which contains all data and information required for calculation of biological indicators (including catch data from non-EU countries), and which is updated every year (see section 3.5.1.3, STECF 15-15).

[8] Scientific, Technical and Economic Committee for Fisheries (STECF) – Monitoring the performance of the Common Fisheries Policy (STECF-15-04). 2015. Publications Office of the European Union, Luxembourg, EUR XXXX EN, JRC XXXX, 147 pp.

	4. With the exception of stocks assessed as being below the B_{lim} biological level, identifying and categorizing 'stocks at risk' is subjective due to a range of terminology used in stock advice. The Expert Group suggests in future to provide two versions of the SAR; one based on B_{lim} values (criterion a) and a second based on criteria b-d given in the Guidelines (COM (2014) 545 FINAL).	4. EWG 16-09 indicator preparatory meeting discussed this issue, in particular with regards to the interpretation of criterion b for Mediterranean stocks. Ultimately this issue cannot be addressed without changing guidelines. EWG 16-09 reaffirms the need for a dedicated EWG to revise indicator guidelines.
	5. In order to consider IUCN data in future (criterion d), the precise IUCN categories to be included in the SAR indicator calculations need to be agreed with the Commission.	5. EWG 16-09 indicator preparatory meeting discussed the issue of IUCN categories. The EWG 16-09 Prep. Meeting agreed with the approach taken by the expert selecting SAR to only consider species with a Critically Endangered (CR) status. Ultimately this issue cannot be addressed without changing guidelines. EWG 16-09 reaffirms the need for a dedicated EWG to revise indicator guidelines.
	6. In addition to the IUCN Red List and CITES, species lists from other conventions (e.g. OSPAR and CMS, Barcelona Convention, etc.) could in future be considered. A time consuming data gathering exercise would be necessary to include all these listings; such an exercise should be separated from the actual calculation of the indicator.	6. Issue cannot be addressed without changing guidelines. EWG 16-09 reaffirms the need for a dedicated EWG to revise indicator guidelines.
Economic & technical indicators - general	1. Inconsistent clustering of fleet segments over time makes the interpretation of economic indicators for such clusters problematic.	1. Probable cases of inconsistent clustering were flagged during AER 1 and the EWG 16-09 indicator preparatory meeting was informed that some MS were able to improve on this. EWG 16-09 indicator preparatory

		meeting considers that it may not always possible to have consistent clusters, unless 'fake' or super clusters are used (which should not be encouraged). Moreover, the composition of fleet segments is always changing due to the 'dominance criteria' (listed in Commission Decision 2008/949/EC; Annex I, section A2.2), so there are inherent inconsistencies even when not considering clusters. EWG 16-09 is currently unable to propose a solution to the issue of inconsistent clustering.
	2. Assessment of economic and technical indicators for small scale fleet segments is challenging. Economic indicators are generally calculated based on the assumption that fishing is the main economic activity of the fleet segments being assessed. This is often not the case for small-scale fishing fleets where fishing is often only a supplementary source of income.	2. EWG 16-09 considers that economic and technical indicators for small-scale fleet segments should always be interpreted with caution, and that local expert knowledge is generally required to accurately interpret indictor results/trends.
Return on Investment (ROI) and/or Return on Fixed Tangible Assets (RoFTA)	1. With regards to the application of the long term economic indicator ROI or RoFTA, the 2014 Balance Indicator Guidelines specify that the indicator is to be compared against the 'low risk long term interest rate'. The guidelines further suggest to use the '*use the arithmetic average interest rate for the previous 5 years'*. Balance EWGs take this approach and e.g. the STECF 15-02 specifies that the '*5-year average of the risk free long-term interest rate for each MS was used'*. On	1. EWG 16-09 indicator preparatory meeting notes that the lack of homogeneity in the methodology to estimate ROI and/or RoFTA by Balance EWGs (which use the approach given in the Commission guidelines) and the AER process was considered in detail by the 2016 AER meeting. It appears that the issue cannot be addressed without changing the Balance guidelines. EWG 16-09 reviewed the AER recommendations and reaffirms the suggestion for a dedicated EWG to revise

	the other hand, the Annual Economic Report (AER) 2015 uses the 'real interest rate'.	indicator guidelines.
Ratio between current revenue and break-even revenue (CR/BER)	1. Presentation / interpretation of trends: due to the volatile nature of variable costs associated with fishing, the CR/BER indicator values may fluctuate considerably from one year to the next and commenting on trends which may be driven by the price of fuel for instance, does not necessarily help inform an assessment of fleet under- or over-capacity in relation to fishing opportunities.	2. EWG 16-09 indicator preparatory meeting considers that whilst short term volatility is informative, in the long-term it is not. Moreover, the long-term approach overlaps with ROI or RoFTA. The long-term approach suggested in the guidelines should thus not be used and the EWG 16-09 balance indicator tables will as a result only present the short-term approach. EWG 16-09 reaffirms the need for a dedicated EWG to revise indicator guidelines.
Inactive Fleet Indicators	1. In some MS (esp. in the Mediterranean) there is high 'inactivity' for various reasons: many small vessels only operate part time / on a seasonal basis; fishers may own several boats, some of which are used as stand-by vessels for various reasons (see Finland / Italy /Malta 2015 annual reports).	1. EWG 16-09 considers that technical indicators always be interpreted with caution, and that local expert knowledge is generally required to accurately interpret indictor results/trends. This is in particular the case for small-scale fleet segments.
Vessel Use Indicator	1. Data on maximum days at sea (DAS) is not always submitted by MS, in which case a common theoretical maximum DAS of 220 days is used. The use of a theoretical DAS of 220 is not relevant for some fleet segments, in particular where fishing activities are seasonal.	1. STECF 15-15 considers that the use of a default value of 220 DAS to be used if no data on the maximum observed DAS is available should not be applied to vessels which measure less than 12 m in length. A clear methodology on how to calculate maximum DAS should be provide to MS to facilitate the calculation of correct values of maximum DAS. EWG 16-09 indicator preparatory meeting notes that an effort to standardise the calculation of DAS as well as fishing days was made by the second

		transversal variables workshop held in Nicosia in February 2016 (see Annex 5, Ribeiro et al., 2016). EWG 16-09 considers that this proposal should be reviewed at a dedicated EWG to revise indicator guidelines.
	2. In some MS vessel use within fleet segments is not homogenous because only parts of the fleet are fishing full time for various reasons (e.g. fleet segments include a proportion of part-time fishers; older vessels being inactive during periods of maintenance or repair, breaks imposed on parts of fleet segments due to management measures with some vessels compensating by targeting other stocks and others remaining inactive).	2. EWG 16-09 considers that technical indicators always be interpreted with caution, and that local expert knowledge is generally required to accurately interpret indictor results/trends. This is in particular the case for small-scale fleet segments.

11 ANNEX II – PERCENTAGE OF TOTAL LANDINGS DATA (VALUES) SUBMITTED BY MEMBER STATES FOR WHICH ONLY INFORMATION FOR AGGREGATED SPECIES GROUPS IS AVAILABLE IN 2015

Country	Prop. landing value (%)	List of Species Groups
BEL	7.85	Anglerfishes nei, Atlantic redfishes nei, Catsharks, nursehounds nei, Common squids nei, Demersal percomorphs nei, Jack and horse mackerels nei, Marine crustaceans nei, Marine fishes nei, Megrims nei, Mullets nei, Octopuses nei, Raja rays nei, Smooth-hounds nei, Various sharks nei, Wrasses, hogfishes, etc. nei
CYP	15.57	Barracudas nei, Catsharks, etc. nei, Common squids nei, Cuttlefishes nei, Dogfishes nei, Flatfishes nei, Forkbeards nei, Groupers nei, Guitarfishes nei, Gurnards, searobins nei, Herrings, sardines nei, Homarus lobsters nei, Houndsharks, smoothhounds nei, Jack and horse mackerels nei, Lagocephalus spp, Lizardfishes nei, Marine crabs nei, Marine fishes nei, Monkfishes nei, Mullets nei, Natantian decapods nei, Octopuses, etc. nei, Ommastrephidae squids nei, Palinurid spiny lobsters nei, Penaeid shrimps nei, Penaeus shrimps nei, Picarels nei, Puffers nei, Raja rays nei, Rays and skates nei, Scomber mackerels nei, Scorpionfishes, rockfishes nei, Slipper lobsters nei, Smooth-hounds nei, Spinefeet(=Rabbitfishes) nei, Squirrelfishes nei, Stingrays, butterfly rays nei, Weeverfishes nei, Wrasses, hogfishes, etc. nei
DEU	6.50	Anglerfishes nei, Atlantic redfishes nei, Dogfish sharks nei, Freshwater breams nei, Freshwater fishes nei, Jack and horse mackerels nei, Lefteye flounders nei, Megrims nei, Mullets nei, Raja rays nei, Rays, stingrays, mantas nei, Sandeels(=Sandlances) nei, Surmullets(=Red mullets) nei, Trouts nei, Various squids nei, Wolffishes(=Catfishes) nei
DNK	8.92	Atlantic redfishes nei, Cuttlefish, bobtail squids nei, Finfishes nei, Freshwater fishes nei, Gobies nei, Gurnards nei, Marine crabs nei, Mullets nei, Rays and skates nei, Sandeels(=Sandlances) nei, Scallops nei, Seabasses nei, Starfishes nei, Wolffishes(=Catfishes) nei
ESP	7.87	Aetobatus spp, Alfonsinos, etc. nei, Alfonsinos nei, Alloteuthis squids nei, Amberjacks nei, Anchovies, etc. nei, Anchovies nei, Angelfishes nei, Angelsharks, sand devils nei, Anglerfishes nei, Antarctic rockcods, noties nei, Aphanopus spp, Aquatic invertebrates nei, Aristeid shrimps nei, Aristeus shrimps nei, Arm squids nei, Atlantic gobies nei, Atlantic puffers nei, Atlantic redfishes nei, Balistes spp, Barracudas, etc. nei, Barracudas nei, Barracudinas, etc. nei, Bathyraja rays nei, Bigeyes nei, Boarfishes nei, Bonitos nei, Boxfishes nei, Brama spp, Brazilian groupers nei, Butterfishes, pomfrets nei, Butterfly rays nei, Callinectes swimcrabs nei, Carangids nei, Carcharhinus sharks nei, Carcinus crabs nei, Cardinalfishes, etc. nei, Cardinal fishes nei, Cartilaginous fishes nei, Catsharks, etc. nei, Catsharks, nursehounds nei, Centroscyllium dogfishes nei, Cephalopods nei, Chaceon geryons nei, Chars nei, Citharids nei,

Country	Prop. landing value (%)	List of Species Groups
		Clams, etc. nei, Combers nei, Common squids nei, Conger eels, etc. nei, Conger eels nei, Crangonid shrimps nei, Crangon shrimps nei, Crest-tail catsharks nei, Croakers, drums nei, Croakers nei, Cusk-eels nei, Cuttlefish, bobtail squids nei, Cuttlefishes nei, Daggerhead breams nei, Deep-water sharks nei, Demersal percomorphs nei, Dentex nei, Diadromous fishes nei, Disc-fin squids nei, Dogfishes and hounds nei, Dogfishes nei, Dogfish sharks, etc. nei, Dogfish sharks nei, Dolphinfishes nei, Dories nei, Dragonfishes nei, Drums nei, Eagle rays nei, Eelpouts nei, Electric rays nei, Elephantfishes, etc. nei, Filefishes, leatherjackets nei, Filefishes nei, Finfishes nei, Flabellum cup corals nei, Flatfishes nei, Flyingfishes nei, Flying squids nei, Forkbeards nei, Fulvia spp, Gadiformes nei, Gastropods nei, Glow-bellies, splitfins nei, Goatfishes, red mullets nei, Gobies nei, Grenadiers nei, Grenadiers, rattails nei, Groundfishes nei, Groupers nei, Groupers, seabasses nei, Grunts, sweetlips nei, Guitarfishes, etc. nei, Guitarfishes nei, Gulf butterfishes, etc. nei, Gulper sharks nei, Gurnards nei, Gurnards, searobins nei, Hairtails nei, Hairtails, scabbardfishes nei, Hakes nei, Hemiramphus spp, Herrings, sardines nei, Hexaplex spp, Homarus lobsters nei, Horse mussels nei, Houndsharks, smoothhounds nei, Indian mackerels nei, Inshore squids nei, Jack and horse mackerels nei, Jacks, crevalles nei, Jobfishes nei, Kelps nei, King crabs nei, King crabs, stone crabs nei, Knife shrimps nei, Lambis spp, Lancetfishes nei, Lanternsharks nei, Lefteye flounders nei, Lings nei, Liocarcinus swimcrabs nei, Lizardfishes nei, Liza spp, Lobsters nei, Mackerels nei, Mactra surf clams nei, Maja spider crabs nei, Mantas, devil rays nei, Marine crabs nei, Marine crustaceans nei, Marine fishes nei, Marine molluscs nei, Marlins,sailfishes,etc. nei, Meagres nei, Megrims nei, Melanostigma spp, Menhadens nei, Merluccid hakes nei, Metanephrops lobsters nei, Metapenaeus shrimps nei, Mojarras(=Silver-biddies) nei, Monkfishes nei, Moras nei, Morays nei, Mugil spp, Mullets nei, Natantian decapods nei, Needlefishes, etc. nei, Needlefishes nei, Northern cods nei, Nototodarus flying squids nei, Nurse sharks nei, Octopuses, etc. nei, Octopuses nei, Ommastrephidae squids nei, Pacific shrimps nei, Palaemonid shrimps nei, Palaemon shrimps nei, Palinurid spiny lobsters nei, Pandalid shrimps nei, Pandalopsis shrimps nei, Pandalus shrimps nei, Pandoras nei, Paralabrax spp, Paranotothenia nei, Parapenaeus shrimps nei, Pargo breams nei, Patagonotothen nei, Pecten scallops nei, Pelagic fishes nei, Pelagic percomorphs nei, Penaeid shrimps nei, Penaeus shrimps nei, Pen shells nei, Percoids nei, Perinereis spp, Picarels, etc. nei, Picarels nei, Plesionika shrimps nei, Pogonophryne spp, Polystegan seabreams nei, Pomfrets, ocean breams nei, Pompanos nei, Ponyfishes(=Slipmouths) nei, Porgies, seabreams nei, Portunus swimcrabs nei, Psammobatis sand skates nei, Rainbow sardines nei, Raja rays nei, Rays and skates nei, Rays, stingrays, mantas nei, Requiem sharks nei, Righteye flounders nei, River eels nei, Rocklings nei, Rock lobsters nei, Rosefishes nei, Ruffs, barrelfishes nei, Sandeels(=Sandlances) nei, Sand flounders nei, Sand smelts nei, Sardinellas nei, Sargo breams nei, Saurida spp, Sauries nei, Scads nei, Scallops nei, Schedophilus nei, Sciaenas nei, Scomber mackerels nei, Scorpionfishes nei, Scorpionfishes, rockfishes nei, Sculptured shrimps nei, Seabasses nei, Sea chubs nei, Sea cucumbers nei, Sea squirts nei, Sea urchins, etc. nei, Seaweeds nei, Sepiola bobtail squids nei, Sergestid shrimps nei, Shads nei, Sharks, rays, skates, etc. nei, Sharpnose sharks nei, Shortfin squids nei, Silver pomfrets nei, Silversides(=Sand smelts) nei, Slimeheads nei, Slipper lobsters nei, Smooth-hounds nei,

Country	Prop. landing value (%)	List of Species Groups
		Snake mackerels, escolars nei, Snappers nei, Snipefishes nei, Snooks(=Robalos) nei, Solea spp, Solenocerid shrimps nei, Soles nei, Spadefishes nei, Spearfishes nei, Spear lobsters nei, Spiny lobsters nei, Spiny plunderfishes nei, Spiny turbots nei, Spirulina nei, Squillids nei, Steenbrasses nei, Stingrays, butterfly rays nei, Stingrays nei, Stolephorus anchovies nei, Stromboid conchs nei, Surf clams nei, Surgeonfishes nei, Surmullets(=Red mullets) nei, Swimming crabs, etc. nei, Symphodus wrasses nei, Tanner crabs nei, Tellins nei, Thickback soles nei, Threadfin breams nei, Threadfins, tasselfishes nei, Thresher sharks nei, Thumbstall squids nei, Tilefishes nei, Toadfishes, etc. nei, Toadfishes nei, Todarodes flying squids nei, Tonguesole nei, Trachypenaeus shrimps nei, Trematomus nei, Triggerfishes, durgons nei, Trisopterus nei, Tropical spiny lobsters nei, True lobsters,lobsterettes nei, True tunas nei, Trumpeters nei, Tunas nei, Turbots nei, Tuskfishes nei, Urophycis nei, Various sharks nei, Various squids nei, Venus clams nei, Weakfishes nei, Weeverfishes nei, Weevers nei, West African croakers nei, Whitefishes nei, Wolffishes(=Catfishes) nei, Wrasses, hogfishes, etc. nei

12 ANNEX III – COMPLIMENTARY DATA FOR THE SUSTAINABLE HARVEST INDICATOR

Information on the number of stocks for which assessments were available when calculating the Sustainable Harvest Indicator (SHI) and the number of stocks considered overfished ($F_{current}$ > F_{MSY} or its proxy $F_{0.1}$), provided by Member State (MS) fleet segment.

AREA	MS	Fleet Segment Code	Number of assessed stocks (2015)	Number of overfished stocks (2015)
AREA27	BEL	BEL-AREA27-DTS-VL2440-NGI	31	14
AREA27	BEL	BEL-AREA27-PMP-VL1824-NGI	12	7
AREA27	BEL	BEL-AREA27-TBB-VL1824-NGI	22	13
AREA27	BEL	BEL-AREA27-TBB-VL2440-NGI	37	17
AREA27	DEU	DEU-AREA27-DFN-VL1218-	11	6
AREA27	DEU	DEU-AREA27-DFN-VL2440-	12	7
AREA27	DEU	DEU-AREA27-DTS-VL1012-	6	4
AREA27	DEU	DEU-AREA27-DTS-VL1218-	10	5
AREA27	DEU	DEU-AREA27-DTS-VL1824-	16	10
AREA27	DEU	DEU-AREA27-DTS-VL2440-	17	8
AREA27	DEU	DEU-AREA27-DTS-VL40XX-	20	7
AREA27	DEU	DEU-AREA27-PG-VL0010-	7	4
AREA27	DEU	DEU-AREA27-PG-VL1012-	6	4
AREA27	DEU	DEU-AREA27-TBB-VL1012-	3	2
AREA27	DEU	DEU-AREA27-TBB-VL1218-	4	2
AREA27	DEU	DEU-AREA27-TBB-VL1824-	13	10
AREA27	DEU	DEU-AREA27-TBB-VL2440-	11	8
AREA27	DEU	DEU-AREA27-TM-VL40XX-	23	10
AREA27	DNK	DNK-AREA27-DRB-VL1012-NGI	1	1
AREA27	DNK	DNK-AREA27-DTS-VL0010-NGI	15	8
AREA27	DNK	DNK-AREA27-DTS-VL1012-NGI	16	7
AREA27	DNK	DNK-AREA27-DTS-VL1218-NGI	25	12
AREA27	DNK	DNK-AREA27-DTS-VL1824-NGI	23	11
AREA27	DNK	DNK-AREA27-DTS-VL2440-NGI	28	11
AREA27	DNK	DNK-AREA27-DTS-VL40XX-NGI	18	8
AREA27	DNK	DNK-AREA27-PGP-VL0010-NGI	15	7
AREA27	DNK	DNK-AREA27-PGP-VL1012-NGI	15	7
AREA27	DNK	DNK-AREA27-PGP-VL1218-NGI	15	8
AREA27	DNK	DNK-AREA27-PMP-VL0010-NGI	14	7
AREA27	DNK	DNK-AREA27-PMP-VL1012-NGI	15	7
AREA27	DNK	DNK-AREA27-PMP-VL1218-NGI	23	12
AREA27	DNK	DNK-AREA27-PMP-VL1824-NGI	16	8
AREA27	DNK	DNK-AREA27-TBB-VL1218-NGI	8	5
AREA27	DNK	DNK-AREA27-TBB-VL1824-NGI	10	6
AREA27	DNK	DNK-AREA27-TM-VL1218-NGI	19	9
AREA27	DNK	DNK-AREA27-TM-VL40XX-NGI	22	8

AREA	MS	Fleet Segment Code	Number of assessed stocks (2015)	Number of overfished stocks (2015)
AREA27	ESP	ESP-AREA27-DFN-VL0010-	6	2
AREA27	ESP	ESP-AREA27-DFN-VL1012-	13	7
AREA27	ESP	ESP-AREA27-DFN-VL1218-	15	8
AREA27	ESP	ESP-AREA27-DFN-VL1824-	12	6
AREA27	ESP	ESP-AREA27-DFN-VL2440-	11	6
AREA27	ESP	ESP-AREA27-DRB-VL0010-	9	4
AREA27	ESP	ESP-AREA27-DRB-VL1218-	1	1
AREA27	ESP	ESP-AREA27-DTS-VL1012-	5	4
AREA27	ESP	ESP-AREA27-DTS-VL1218-	11	5
AREA27	ESP	ESP-AREA27-DTS-VL1824-	12	5
AREA27	ESP	ESP-AREA27-DTS-VL2440-	23	9
AREA27	ESP	ESP-AREA27-DTS-VL40XX-	14	6
AREA27	ESP	ESP-AREA27-FPO-VL1012-	12	6
AREA27	ESP	ESP-AREA27-FPO-VL1218-	10	5
AREA27	ESP	ESP-AREA27-HOK-VL0010-	3	3
AREA27	ESP	ESP-AREA27-HOK-VL1012-	14	7
AREA27	ESP	ESP-AREA27-HOK-VL1218-	12	6
AREA27	ESP	ESP-AREA27-HOK-VL1824-	9	4
AREA27	ESP	ESP-AREA27-HOK-VL2440-	5	3
AREA27	ESP	ESP-AREA27-PGO-VL1218-	2	1
AREA27	ESP	ESP-AREA27-PGO-VL1824-	3	2
AREA27	ESP	ESP-AREA27-PGO-VL2440-	2	1
AREA27	ESP	ESP-AREA27-PGP-VL1824-	3	1
AREA27	ESP	ESP-AREA27-PGP-VL2440-	7	3
AREA27	ESP	ESP-AREA27-PMP-VL0010-	12	6
AREA27	ESP	ESP-AREA27-PMP-VL1012-	11	5
AREA27	ESP	ESP-AREA27-PMP-VL1218-	15	7
AREA27	ESP	ESP-AREA27-PMP-VL1824-	10	5
AREA27	ESP	ESP-AREA27-PMP-VL2440-	9	5
AREA27	ESP	ESP-AREA27-PS-VL0010-	2	1
AREA27	ESP	ESP-AREA27-PS-VL1012-	9	3
AREA27	ESP	ESP-AREA27-PS-VL1218-	7	2
AREA27	ESP	ESP-AREA27-PS-VL1824-	4	1
AREA27	ESP	ESP-AREA27-PS-VL2440-	5	2
AREA27	EST	EST-AREA27-DTS-VL1218-NGI	2	1
AREA27	EST	EST-AREA27-PG-VL0010-NGI	3	2
AREA27	EST	EST-AREA27-PG-VL1012-NGI	2	1
AREA27	EST	EST-AREA27-TM-VL1218-NGI	2	1
AREA27	EST	EST-AREA27-TM-VL1824-NGI	3	2
AREA27	EST	EST-AREA27-TM-VL2440-NGI	3	2
AREA27	FIN	FIN-AREA27-PG-VL0010-	3	1

AREA	MS	Fleet Segment Code	Number of assessed stocks (2015)	Number of overfished stocks (2015)
AREA27	FIN	FIN-AREA27-PG-VL1012-	3	1
AREA27	FIN	FIN-AREA27-TM-VL1218-	5	3
AREA27	FIN	FIN-AREA27-TM-VL1824-	4	2
AREA27	FIN	FIN-AREA27-TM-VL2440-	4	2
AREA27	FRA	FRA-AREA27-DFN-VL0010-	25	12
AREA27	FRA	FRA-AREA27-DFN-VL1012-	29	13
AREA27	FRA	FRA-AREA27-DFN-VL1218-	28	14
AREA27	FRA	FRA-AREA27-DFN-VL1824-	27	15
AREA27	FRA	FRA-AREA27-DFN-VL2440-	12	7
AREA27	FRA	FRA-AREA27-DRB-VL0010-	18	9
AREA27	FRA	FRA-AREA27-DRB-VL1012-	18	10
AREA27	FRA	FRA-AREA27-DRB-VL1218-	16	8
AREA27	FRA	FRA-AREA27-DRB-VL1824-	13	8
AREA27	FRA	FRA-AREA27-DRB-VL2440-	4	3
AREA27	FRA	FRA-AREA27-DTS-VL0010-	22	11
AREA27	FRA	FRA-AREA27-DTS-VL1012-	23	12
AREA27	FRA	FRA-AREA27-DTS-VL1218-	33	14
AREA27	FRA	FRA-AREA27-DTS-VL1824-	43	17
AREA27	FRA	FRA-AREA27-DTS-VL2440-	47	19
AREA27	FRA	FRA-AREA27-DTS-VL40XX-	28	12
AREA27	FRA	FRA-AREA27-FPO-VL0010-	13	7
AREA27	FRA	FRA-AREA27-FPO-VL1012-	16	9
AREA27	FRA	FRA-AREA27-FPO-VL1218-	4	2
AREA27	FRA	FRA-AREA27-FPO-VL1824-	5	4
AREA27	FRA	FRA-AREA27-HOK-VL0010-	21	11
AREA27	FRA	FRA-AREA27-HOK-VL1012-	20	11
AREA27	FRA	FRA-AREA27-HOK-VL1218-	9	5
AREA27	FRA	FRA-AREA27-HOK-VL1824-	5	2
AREA27	FRA	FRA-AREA27-HOK-VL2440-	15	8
AREA27	FRA	FRA-AREA27-MGO-VL0010-	6	3
AREA27	FRA	FRA-AREA27-MGO-VL1012-	6	3
AREA27	FRA	FRA-AREA27-MGP-VL0010-	12	6
AREA27	FRA	FRA-AREA27-MGP-VL1012-	15	7
AREA27	FRA	FRA-AREA27-MGP-VL1218-	13	7
AREA27	FRA	FRA-AREA27-MGP-VL1824-	22	11
AREA27	FRA	FRA-AREA27-MGP-VL2440-	10	6
AREA27	FRA	FRA-AREA27-PGO-VL0010-	9	4
AREA27	FRA	FRA-AREA27-PGP-VL0010-	19	9
AREA27	FRA	FRA-AREA27-PGP-VL1012-	20	10
AREA27	FRA	FRA-AREA27-PGP-VL1218-	8	4
AREA27	FRA	FRA-AREA27-PMP-VL0010-	16	10

AREA	MS	Fleet Segment Code	Number of assessed stocks (2015)	Number of overfished stocks (2015)
AREA27	FRA	FRA-AREA27-PMP-VL1012-	19	10
AREA27	FRA	FRA-AREA27-PMP-VL1218-	8	4
AREA27	FRA	FRA-AREA27-PS-VL1012-	6	3
AREA27	FRA	FRA-AREA27-PS-VL1218-	10	4
AREA27	FRA	FRA-AREA27-PS-VL1824-	8	4
AREA27	FRA	FRA-AREA27-TBB-VL1012-	5	4
AREA27	FRA	FRA-AREA27-TBB-VL1218-	12	7
AREA27	FRA	FRA-AREA27-TM-VL1012-	7	3
AREA27	FRA	FRA-AREA27-TM-VL1218-	16	7
AREA27	FRA	FRA-AREA27-TM-VL1824-	23	12
AREA27	FRA	FRA-AREA27-TM-VL2440-	8	4
AREA27	FRA	FRA-AREA27-TM-VL40XX-	11	5
AREA27	GBR	GBR-AREA27-DFN-VL0010-NGI	28	13
AREA27	GBR	GBR-AREA27-DFN-VL1012-NGI	19	10
AREA27	GBR	GBR-AREA27-DFN-VL1218-NGI	18	9
AREA27	GBR	GBR-AREA27-DFN-VL1824-NGI	15	7
AREA27	GBR	GBR-AREA27-DFN-VL2440-NGI	3	1
AREA27	GBR	GBR-AREA27-DRB-VL0010-NGI	31	13
AREA27	GBR	GBR-AREA27-DRB-VL1012-NGI	24	11
AREA27	GBR	GBR-AREA27-DRB-VL1218-NGI	34	14
AREA27	GBR	GBR-AREA27-DRB-VL1824-NGI	20	7
AREA27	GBR	GBR-AREA27-DRB-VL2440-NGI	18	9
AREA27	GBR	GBR-AREA27-DRB-VL40XX-NGI	1	1
AREA27	GBR	GBR-AREA27-DTS-VL0010-NGI	39	17
AREA27	GBR	GBR-AREA27-DTS-VL1012-NGI	36	15
AREA27	GBR	GBR-AREA27-DTS-VL1218-NGI	47	18
AREA27	GBR	GBR-AREA27-DTS-VL1824-NGI	47	18
AREA27	GBR	GBR-AREA27-DTS-VL2440-NGI	58	22
AREA27	GBR	GBR-AREA27-DTS-VL40XX-NGI	33	16
AREA27	GBR	GBR-AREA27-FPO-VL0010-NGI	38	15
AREA27	GBR	GBR-AREA27-FPO-VL1012-NGI	28	13
AREA27	GBR	GBR-AREA27-FPO-VL1218-NGI	11	5
AREA27	GBR	GBR-AREA27-HOK-VL0010-NGI	26	11
AREA27	GBR	GBR-AREA27-HOK-VL1012-NGI	12	6
AREA27	GBR	GBR-AREA27-HOK-VL2440-NGI	4	
AREA27	GBR	GBR-AREA27-MGP-VL0010-NGI	22	11
AREA27	GBR	GBR-AREA27-MGP-VL1218-NGI	10	4
AREA27	GBR	GBR-AREA27-PGP-VL0010-NGI	23	13
AREA27	GBR	GBR-AREA27-PGP-VL1012-NGI	7	4
AREA27	GBR	GBR-AREA27-PMP-VL0010-NGI	11	6
AREA27	GBR	GBR-AREA27-PS-VL1218-NGI	1	1

AREA	MS	Fleet Segment Code	Number of assessed stocks (2015)	Number of overfished stocks (2015)
AREA27	GBR	GBR-AREA27-TBB-VL0010-NGI	11	6
AREA27	GBR	GBR-AREA27-TBB-VL1012-NGI	4	3
AREA27	GBR	GBR-AREA27-TBB-VL1218-NGI	16	9
AREA27	GBR	GBR-AREA27-TBB-VL1824-NGI	22	11
AREA27	GBR	GBR-AREA27-TBB-VL2440-NGI	25	14
AREA27	GBR	GBR-AREA27-TBB-VL40XX-NGI	10	7
AREA27	GBR	GBR-AREA27-TM-VL0010-NGI	3	1
AREA27	GBR	GBR-AREA27-TM-VL1218-NGI	13	6
AREA27	GBR	GBR-AREA27-TM-VL2440-NGI	4	1
AREA27	GBR	GBR-AREA27-TM-VL40XX-NGI	15	6
AREA27	IRL	IRL-AREA27-DFN-VL0010-	27	9
AREA27	IRL	IRL-AREA27-DFN-VL1012-	16	7
AREA27	IRL	IRL-AREA27-DFN-VL1218-	14	7
AREA27	IRL	IRL-AREA27-DFN-VL1824-	10	4
AREA27	IRL	IRL-AREA27-DFN-VL2440-	5	3
AREA27	IRL	IRL-AREA27-DRB-VL0010-	11	5
AREA27	IRL	IRL-AREA27-DRB-VL1012-	3	1
AREA27	IRL	IRL-AREA27-DTS-VL0010-	25	8
AREA27	IRL	IRL-AREA27-DTS-VL1012-	28	9
AREA27	IRL	IRL-AREA27-DTS-VL1218-	32	12
AREA27	IRL	IRL-AREA27-DTS-VL1824-	37	12
AREA27	IRL	IRL-AREA27-DTS-VL2440-	38	12
AREA27	IRL	IRL-AREA27-FPO-VL0010-	27	7
AREA27	IRL	IRL-AREA27-FPO-VL1012-	20	8
AREA27	IRL	IRL-AREA27-FPO-VL1218-	10	4
AREA27	IRL	IRL-AREA27-HOK-VL0010-	19	7
AREA27	IRL	IRL-AREA27-HOK-VL1012-	1	1
AREA27	IRL	IRL-AREA27-HOK-VL1218-	3	1
AREA27	IRL	IRL-AREA27-PMP-VL1012-	5	4
AREA27	IRL	IRL-AREA27-TBB-VL0010-	6	4
AREA27	IRL	IRL-AREA27-TBB-VL1824-	15	4
AREA27	IRL	IRL-AREA27-TBB-VL2440-	17	6
AREA27	IRL	IRL-AREA27-TM-VL0010-	27	11
AREA27	IRL	IRL-AREA27-TM-VL1012-	15	6
AREA27	IRL	IRL-AREA27-TM-VL1218-	17	6
AREA27	IRL	IRL-AREA27-TM-VL1824-	11	4
AREA27	IRL	IRL-AREA27-TM-VL2440-	23	9
AREA27	IRL	IRL-AREA27-TM-VL40XX-	12	4
AREA27	LTU	LTU-AREA27-DFN-VL1012-	1	
AREA27	LTU	LTU-AREA27-DTS-VL1824-	3	2
AREA27	LTU	LTU-AREA27-DTS-VL2440-	2	1

AREA	MS	Fleet Segment Code	Number of assessed stocks (2015)	Number of overfished stocks (2015)
AREA27	LTU	LTU-AREA27-PG-VL0010-	2	1
AREA27	LTU	LTU-AREA27-TM-VL2440-	3	2
AREA27	LTU	LTU-AREA27-TM-VL40XX-	3	2
AREA27	LVA	LVA-AREA27-PGP-VL0010-NGI	2	1
AREA27	LVA	LVA-AREA27-TM-VL1218-NGI	2	1
AREA27	LVA	LVA-AREA27-TM-VL2440-NGI	4	3
AREA27	NLD	NLD-AREA27-DFN-VL1218-NGI	6	5
AREA27	NLD	NLD-AREA27-DFN-VL1824-NGI	2	1
AREA27	NLD	NLD-AREA27-DRB-VL2440-NGI	1	1
AREA27	NLD	NLD-AREA27-DTS-VL0010-NGI	4	3
AREA27	NLD	NLD-AREA27-DTS-VL1824-NGI	14	8
AREA27	NLD	NLD-AREA27-DTS-VL2440-NGI	23	11
AREA27	NLD	NLD-AREA27-PG-VL0010-NGI	8	5
AREA27	NLD	NLD-AREA27-PG-VL1012-NGI	7	5
AREA27	NLD	NLD-AREA27-TBB-VL0010-NGI	6	5
AREA27	NLD	NLD-AREA27-TBB-VL1218-NGI	5	4
AREA27	NLD	NLD-AREA27-TBB-VL1824-NGI	14	8
AREA27	NLD	NLD-AREA27-TBB-VL2440-NGI	18	9
AREA27	NLD	NLD-AREA27-TBB-VL40XX-NGI	14	8
AREA27	NLD	NLD-AREA27-TM-VL40XX-NGI	19	9
AREA27	POL	POL-AREA27-DFN-VL1218-	3	2
AREA27	POL	POL-AREA27-DTS-VL1218-	4	3
AREA27	POL	POL-AREA27-DTS-VL1824-	5	4
AREA27	POL	POL-AREA27-PG-VL0010-	4	3
AREA27	POL	POL-AREA27-PG-VL1012-	4	3
AREA27	POL	POL-AREA27-TM-VL1824-	4	3
AREA27	POL	POL-AREA27-TM-VL2440-	6	5
AREA27	PRT	PRT-AREA27-DFN-VL0010-NGI	6	4
AREA27	PRT	PRT-AREA27-DFN-VL0010-P3	1	1
AREA27	PRT	PRT-AREA27-DFN-VL1012-NGI	9	5
AREA27	PRT	PRT-AREA27-DFN-VL1218-NGI	10	6
AREA27	PRT	PRT-AREA27-DFN-VL1824-NGI	9	6
AREA27	PRT	PRT-AREA27-DRB-VL0010-NGI	1	
AREA27	PRT	PRT-AREA27-DTS-VL0010-NGI	7	5
AREA27	PRT	PRT-AREA27-DTS-VL1218-NGI	10	5
AREA27	PRT	PRT-AREA27-DTS-VL1824-NGI	7	4
AREA27	PRT	PRT-AREA27-DTS-VL2440-NGI	14	7
AREA27	PRT	PRT-AREA27-DTS-VL40XX-IWE	3	
AREA27	PRT	PRT-AREA27-FPO-VL0010-NGI	6	3
AREA27	PRT	PRT-AREA27-FPO-VL1012-NGI	5	2
AREA27	PRT	PRT-AREA27-FPO-VL1218-NGI	8	4

AREA	MS	Fleet Segment Code	Number of assessed stocks (2015)	Number of overfished stocks (2015)
AREA27	PRT	PRT-AREA27-FPO-VL1824-NGI	8	5
AREA27	PRT	PRT-AREA27-HOK-VL0010-NGI	6	4
AREA27	PRT	PRT-AREA27-HOK-VL0010-P3	2	1
AREA27	PRT	PRT-AREA27-HOK-VL1012-NGI	4	2
AREA27	PRT	PRT-AREA27-HOK-VL1012-P3	2	1
AREA27	PRT	PRT-AREA27-HOK-VL1218-NGI	8	4
AREA27	PRT	PRT-AREA27-HOK-VL1218-P3	2	1
AREA27	PRT	PRT-AREA27-HOK-VL1824-NGI	6	2
AREA27	PRT	PRT-AREA27-HOK-VL2440-NGI	5	3
AREA27	PRT	PRT-AREA27-HOK-VL2440-P3	3	2
AREA27	PRT	PRT-AREA27-MGO-VL0010-NGI	4	3
AREA27	PRT	PRT-AREA27-MGO-VL1012-NGI	2	1
AREA27	PRT	PRT-AREA27-PGP-VL0010-NGI	11	5
AREA27	PRT	PRT-AREA27-PGP-VL0010-P3	1	1
AREA27	PRT	PRT-AREA27-PGP-VL1012-NGI	6	4
AREA27	PRT	PRT-AREA27-PGP-VL1218-NGI	9	5
AREA27	PRT	PRT-AREA27-PMP-VL0010-NGI	5	3
AREA27	PRT	PRT-AREA27-PS-VL0010-NGI	5	3
AREA27	PRT	PRT-AREA27-PS-VL0010-P3	2	1
AREA27	PRT	PRT-AREA27-PS-VL1012-NGI	5	3
AREA27	PRT	PRT-AREA27-PS-VL1012-P3	1	1
AREA27	PRT	PRT-AREA27-PS-VL1218-NGI	5	3
AREA27	PRT	PRT-AREA27-PS-VL1824-NGI	5	4
AREA27	PRT	PRT-AREA27-PS-VL2440-NGI	3	2
AREA27	PRT	PRT-AREA27-TBB-VL0010-NGI	5	3
AREA27	PRT	PRT-AREA27-TBB-VL1012-NGI	2	1
AREA27	SWE	SWE-AREA27-DFN-VL0010-NGI	16	7
AREA27	SWE	SWE-AREA27-DFN-VL1012-NGI	15	7
AREA27	SWE	SWE-AREA27-DFN-VL1218-NGI	10	5
AREA27	SWE	SWE-AREA27-DTS-VL0010-NGI	15	6
AREA27	SWE	SWE-AREA27-DTS-VL1012-NGI	14	6
AREA27	SWE	SWE-AREA27-DTS-VL1218-NGI	18	8
AREA27	SWE	SWE-AREA27-DTS-VL1824-NGI	22	11
AREA27	SWE	SWE-AREA27-DTS-VL2440-NGI	23	11
AREA27	SWE	SWE-AREA27-FPO-VL0010-NGI	14	5
AREA27	SWE	SWE-AREA27-FPO-VL1012-NGI	13	5
AREA27	SWE	SWE-AREA27-FPO-VL1218-NGI	2	1
AREA27	SWE	SWE-AREA27-HOK-VL0010-NGI	6	3
AREA27	SWE	SWE-AREA27-HOK-VL1012-NGI	4	3
AREA27	SWE	SWE-AREA27-HOK-VL1218-NGI	1	1
AREA27	SWE	SWE-AREA27-PGP-VL0010-NGI	12	4

AREA	MS	Fleet Segment Code	Number of assessed stocks (2015)	Number of overfished stocks (2015)
AREA27	SWE	SWE-AREA27-PGP-VL1012-NGI	4	2
AREA27	SWE	SWE-AREA27-PMP-VL1012-NGI	3	1
AREA27	SWE	SWE-AREA27-PMP-VL1218-NGI	1	
AREA27	SWE	SWE-AREA27-PS-VL0010-NGI	1	1
AREA27	SWE	SWE-AREA27-PS-VL1012-NGI	2	1
AREA27	SWE	SWE-AREA27-PS-VL1218-NGI	1	
AREA27	SWE	SWE-AREA27-PS-VL40XX-NGI	7	3
AREA27	SWE	SWE-AREA27-TM-VL1012-NGI	3	2
AREA27	SWE	SWE-AREA27-TM-VL1218-NGI	3	2
AREA27	SWE	SWE-AREA27-TM-VL1824-NGI	4	2
AREA27	SWE	SWE-AREA27-TM-VL2440-NGI	14	7
AREA27	SWE	SWE-AREA27-TM-VL40XX-NGI	16	8
AREA37	BGR	BGR-AREA37-DFN-VL0006-NGI	6	5
AREA37	BGR	BGR-AREA37-DFN-VL0612-NGI	6	5
AREA37	BGR	BGR-AREA37-DFN-VL1218-NGI	4	4
AREA37	BGR	BGR-AREA37-DFN-VL1824-NGI	1	1
AREA37	BGR	BGR-AREA37-FPO-VL0006-NGI	2	2
AREA37	BGR	BGR-AREA37-FPO-VL0612-NGI	4	3
AREA37	BGR	BGR-AREA37-HOK-VL0006-NGI	2	2
AREA37	BGR	BGR-AREA37-HOK-VL0612-NGI	3	3
AREA37	BGR	BGR-AREA37-PGP-VL0006-NGI	1	1
AREA37	BGR	BGR-AREA37-PGP-VL0612-NGI	2	2
AREA37	BGR	BGR-AREA37-PMP-VL0006-NGI	5	4
AREA37	BGR	BGR-AREA37-PMP-VL0612-NGI	4	4
AREA37	BGR	BGR-AREA37-PMP-VL1218-NGI	4	4
AREA37	BGR	BGR-AREA37-PMP-VL1824-NGI	5	4
AREA37	BGR	BGR-AREA37-PS-VL0006-NGI	4	3
AREA37	BGR	BGR-AREA37-PS-VL0612-NGI	4	3
AREA37	BGR	BGR-AREA37-TBB-VL0612-NGI	4	4
AREA37	BGR	BGR-AREA37-TBB-VL1218-NGI	2	1
AREA37	BGR	BGR-AREA37-TBB-VL1824-NGI	3	3
AREA37	BGR	BGR-AREA37-TM-VL0612-NGI	4	3
AREA37	BGR	BGR-AREA37-TM-VL1218-NGI	6	5
AREA37	BGR	BGR-AREA37-TM-VL1824-NGI	5	4
AREA37	BGR	BGR-AREA37-TM-VL2440-NGI	6	5
AREA37	CYP	CYP-AREA37-DTS-VL2440-	5	4
AREA37	CYP	CYP-AREA37-PGO-VL0006-	1	1
AREA37	CYP	CYP-AREA37-PGO-VL0612-	1	1
AREA37	CYP	CYP-AREA37-PGP-VL1218-	4	2
AREA37	CYP	CYP-AREA37-PG-VL0006-	3	2
AREA37	CYP	CYP-AREA37-PG-VL0612-	3	2

AREA	MS	Fleet Segment Code	Number of assessed stocks (2015)	Number of overfished stocks (2015)
AREA37	ESP	ESP-AREA37-DFN-VL0612-	16	13
AREA37	ESP	ESP-AREA37-DFN-VL1218-	17	15
AREA37	ESP	ESP-AREA37-DRB-VL0612-	3	3
AREA37	ESP	ESP-AREA37-DRB-VL1218-	4	3
AREA37	ESP	ESP-AREA37-DTS-VL0612-	16	14
AREA37	ESP	ESP-AREA37-DTS-VL1218-	31	27
AREA37	ESP	ESP-AREA37-DTS-VL1824-	32	29
AREA37	ESP	ESP-AREA37-DTS-VL2440-	36	31
AREA37	ESP	ESP-AREA37-FPO-VL0612-	5	4
AREA37	ESP	ESP-AREA37-FPO-VL1218-	3	3
AREA37	ESP	ESP-AREA37-HOK-VL0612-	16	14
AREA37	ESP	ESP-AREA37-HOK-VL1218-	8	8
AREA37	ESP	ESP-AREA37-HOK-VL1824-	5	5
AREA37	ESP	ESP-AREA37-HOK-VL2440-	1	
AREA37	ESP	ESP-AREA37-PGO-VL0612-	2	1
AREA37	ESP	ESP-AREA37-PGO-VL1218-	6	4
AREA37	ESP	ESP-AREA37-PGO-VL1824-	4	2
AREA37	ESP	ESP-AREA37-PGO-VL2440-	3	2
AREA37	ESP	ESP-AREA37-PMP-VL0006-	22	16
AREA37	ESP	ESP-AREA37-PMP-VL0612-	32	24
AREA37	ESP	ESP-AREA37-PMP-VL1218-	17	16
AREA37	ESP	ESP-AREA37-PS-VL0612-	12	10
AREA37	ESP	ESP-AREA37-PS-VL1218-	14	11
AREA37	ESP	ESP-AREA37-PS-VL1824-	7	4
AREA37	ESP	ESP-AREA37-PS-VL2440-	8	6
AREA37	ESP	ESP-AREA37-PS-VL40XX-	1	
AREA37	FRA	FRA-AREA37-DFN-VL0006-	8	7
AREA37	FRA	FRA-AREA37-DFN-VL0612-	9	8
AREA37	FRA	FRA-AREA37-DFN-VL1218-	7	6
AREA37	FRA	FRA-AREA37-DRB-VL0612-	5	5
AREA37	FRA	FRA-AREA37-DTS-VL1824-	9	8
AREA37	FRA	FRA-AREA37-DTS-VL2440-	9	8
AREA37	FRA	FRA-AREA37-FPO-VL0006-	5	5
AREA37	FRA	FRA-AREA37-FPO-VL0612-	8	7
AREA37	FRA	FRA-AREA37-HOK-VL0006-	3	3
AREA37	FRA	FRA-AREA37-HOK-VL0612-	8	7
AREA37	FRA	FRA-AREA37-HOK-VL1218-	8	7
AREA37	FRA	FRA-AREA37-MGO-VL0612-	4	4
AREA37	FRA	FRA-AREA37-MGP-VL0612-	3	3
AREA37	FRA	FRA-AREA37-PGO-VL0006-	3	3
AREA37	FRA	FRA-AREA37-PGO-VL0612-	5	4

AREA	MS	Fleet Segment Code	Number of assessed stocks (2015)	Number of overfished stocks (2015)
AREA37	FRA	FRA-AREA37-PGP-VL0006-	9	8
AREA37	FRA	FRA-AREA37-PGP-VL0612-	8	7
AREA37	FRA	FRA-AREA37-PMP-VL0612-	8	7
AREA37	FRA	FRA-AREA37-PMP-VL1218-	8	7
AREA37	FRA	FRA-AREA37-PS-VL0612-	7	7
AREA37	FRA	FRA-AREA37-PS-VL1824-	1	1
AREA37	FRA	FRA-AREA37-PS-VL2440-	2	1
AREA37	FRA	FRA-AREA37-PS-VL40XX-	1	
AREA37	FRA	FRA-AREA37-TM-VL2440-	5	4
AREA37	GRC	GRC-AREA37-DFN-VL0612-NGI	1	
AREA37	GRC	GRC-AREA37-DFN-VL1218-NGI	1	1
AREA37	HRV	HRV-AREA37-DFN-VL0006-NGI	12	11
AREA37	HRV	HRV-AREA37-DFN-VL0612-NGI	14	13
AREA37	HRV	HRV-AREA37-DFN-VL1218-NGI	11	10
AREA37	HRV	HRV-AREA37-DRB-VL0612-NGI	9	8
AREA37	HRV	HRV-AREA37-DRB-VL1218-NGI	8	7
AREA37	HRV	HRV-AREA37-DRB-VL1824-NGI	4	3
AREA37	HRV	HRV-AREA37-DTS-VL0006-NGI	6	5
AREA37	HRV	HRV-AREA37-DTS-VL0612-NGI	13	12
AREA37	HRV	HRV-AREA37-DTS-VL1218-NGI	14	13
AREA37	HRV	HRV-AREA37-DTS-VL1824-NGI	14	13
AREA37	HRV	HRV-AREA37-DTS-VL2440-NGI	11	10
AREA37	HRV	HRV-AREA37-FPO-VL0006-NGI	7	6
AREA37	HRV	HRV-AREA37-FPO-VL0612-NGI	9	8
AREA37	HRV	HRV-AREA37-FPO-VL1218-NGI	1	1
AREA37	HRV	HRV-AREA37-HOK-VL0006-NGI	8	7
AREA37	HRV	HRV-AREA37-HOK-VL0612-NGI	14	12
AREA37	HRV	HRV-AREA37-HOK-VL1218-NGI	4	3
AREA37	HRV	HRV-AREA37-MGO-VL0006-NGI	11	10
AREA37	HRV	HRV-AREA37-MGO-VL0612-NGI	10	9
AREA37	HRV	HRV-AREA37-MGO-VL1218-NGI	3	2
AREA37	HRV	HRV-AREA37-MGP-VL0612-NGI	6	6
AREA37	HRV	HRV-AREA37-PGO-VL0006-NGI	8	7
AREA37	HRV	HRV-AREA37-PGP-VL0006-NGI	4	3
AREA37	HRV	HRV-AREA37-PGP-VL0612-NGI	6	5
AREA37	HRV	HRV-AREA37-PMP-VL0006-NGI	11	10
AREA37	HRV	HRV-AREA37-PMP-VL0612-NGI	12	11
AREA37	HRV	HRV-AREA37-PMP-VL1218-NGI	5	4
AREA37	HRV	HRV-AREA37-PS-VL0612-NGI	14	13
AREA37	HRV	HRV-AREA37-PS-VL1218-NGI	10	9
AREA37	HRV	HRV-AREA37-PS-VL1824-NGI	6	6

AREA	MS	Fleet Segment Code	Number of assessed stocks (2015)	Number of overfished stocks (2015)
AREA37	HRV	HRV-AREA37-PS-VL2440-NGI	4	4
AREA37	HRV	HRV-AREA37-PS-VL40XX-NGI	4	4
AREA37	HRV	HRV-AREA37-TM-VL1218-NGI	9	8
AREA37	ITA	ITA-AREA37-DRB-VL1218-NGI	10	8
AREA37	ITA	ITA-AREA37-DTS-VL0612-NGI	28	22
AREA37	ITA	ITA-AREA37-DTS-VL1218-NGI	46	35
AREA37	ITA	ITA-AREA37-DTS-VL1824-NGI	46	35
AREA37	ITA	ITA-AREA37-DTS-VL2440-NGI	36	28
AREA37	ITA	ITA-AREA37-HOK-VL1218-NGI	15	11
AREA37	ITA	ITA-AREA37-HOK-VL1824-NGI	3	2
AREA37	ITA	ITA-AREA37-PGP-VL0006-NGI	22	17
AREA37	ITA	ITA-AREA37-PGP-VL0612-NGI	30	22
AREA37	ITA	ITA-AREA37-PGP-VL1218-NGI	22	17
AREA37	ITA	ITA-AREA37-PMP-VL0612-NGI	2	1
AREA37	ITA	ITA-AREA37-PMP-VL1218-NGI	8	5
AREA37	ITA	ITA-AREA37-PS-VL1218-NGI	14	11
AREA37	ITA	ITA-AREA37-PS-VL1824-NGI	3	2
AREA37	ITA	ITA-AREA37-PS-VL2440-NGI	7	6
AREA37	ITA	ITA-AREA37-PS-VL40XX-NGI	5	4
AREA37	ITA	ITA-AREA37-TBB-VL1218-NGI	7	6
AREA37	ITA	ITA-AREA37-TBB-VL1824-NGI	7	6
AREA37	ITA	ITA-AREA37-TBB-VL2440-NGI	9	8
AREA37	ITA	ITA-AREA37-TM-VL1218-NGI	11	10
AREA37	ITA	ITA-AREA37-TM-VL1824-NGI	14	11
AREA37	ITA	ITA-AREA37-TM-VL2440-NGI	14	12
AREA37	MLT	MLT-AREA37-DFN-VL0006-NGI	2	2
AREA37	MLT	MLT-AREA37-DFN-VL0612-NGI	2	2
AREA37	MLT	MLT-AREA37-DTS-VL1824-NGI	5	4
AREA37	MLT	MLT-AREA37-DTS-VL2440-NGI	10	8
AREA37	MLT	MLT-AREA37-HOK-VL0006-NGI	2	2
AREA37	MLT	MLT-AREA37-HOK-VL0612-NGI	5	4
AREA37	MLT	MLT-AREA37-HOK-VL1218-NGI	3	2
AREA37	MLT	MLT-AREA37-HOK-VL1824-NGI	4	3
AREA37	MLT	MLT-AREA37-MGO-VL0612-NGI	4	3
AREA37	MLT	MLT-AREA37-MGO-VL1218-NGI	1	1
AREA37	MLT	MLT-AREA37-MGO-VL1824-NGI	1	1
AREA37	MLT	MLT-AREA37-PGP-VL0006-NGI	5	4
AREA37	MLT	MLT-AREA37-PGP-VL0612-NGI	5	4
AREA37	MLT	MLT-AREA37-PMP-VL0006-NGI	2	2
AREA37	MLT	MLT-AREA37-PMP-VL0612-NGI	6	5
AREA37	MLT	MLT-AREA37-PS-VL2440-NGI	1	

AREA	MS	Fleet Segment Code	Number of assessed stocks (2015)	Number of overfished stocks (2015)
AREA37	ROU	ROU-AREA37-PG-VL0006-NGI	6	5
AREA37	ROU	ROU-AREA37-PG-VL0612-NGI	8	7
AREA37	ROU	ROU-AREA37-PMP-VL0612-NGI	6	5
AREA37	ROU	ROU-AREA37-PMP-VL1218-NGI	4	4
AREA37	ROU	ROU-AREA37-PMP-VL2440-NGI	2	1
AREA37	SVN	SVN-AREA37-DFN-VL0006-NGI	9	8
AREA37	SVN	SVN-AREA37-DFN-VL0612-NGI	10	9
AREA37	SVN	SVN-AREA37-DTS-VL1218-NGI	10	9
AREA37	SVN	SVN-AREA37-PS-VL1218-NGI	8	8
OFR	ESP	ESP-OFR-DTS-VL2440-	9	4
OFR	ESP	ESP-OFR-FPO-VL1012-	2	1
OFR	ESP	ESP-OFR-FPO-VL1218-	2	1
OFR	ESP	ESP-OFR-HOK-VL0010-	3	
OFR	ESP	ESP-OFR-HOK-VL1012-	4	1
OFR	ESP	ESP-OFR-HOK-VL1218-	4	1
OFR	ESP	ESP-OFR-HOK-VL1824-	3	2
OFR	ESP	ESP-OFR-HOK-VL2440-	2	1
OFR	ESP	ESP-OFR-PGO-VL2440-	9	5
OFR	ESP	ESP-OFR-PGO-VL40XX-	10	6
OFR	ESP	ESP-OFR-PMP-VL0010-	2	1
OFR	ESP	ESP-OFR-PMP-VL1012-	2	1
OFR	ESP	ESP-OFR-PMP-VL1218-	2	1
OFR	ESP	ESP-OFR-PMP-VL1824-	2	1
OFR	ESP	ESP-OFR-PMP-VL2440-	2	1
OFR	ESP	ESP-OFR-PS-VL0010-	2	1
OFR	ESP	ESP-OFR-PS-VL1012-	2	1
OFR	ESP	ESP-OFR-PS-VL1218-	2	1
OFR	ESP	ESP-OFR-PS-VL40XX-	7	3
OFR	FRA	FRA-OFR-HOK-VL0010-	9	5
OFR	FRA	FRA-OFR-HOK-VL1012-	8	5
OFR	FRA	FRA-OFR-HOK-VL1218-	8	5
OFR	FRA	FRA-OFR-HOK-VL1824-	8	5
OFR	FRA	FRA-OFR-HOK-VL2440-	1	1
OFR	FRA	FRA-OFR-PGO-VL0010-	1	1
OFR	FRA	FRA-OFR-PGP-VL0010-	3	2
OFR	FRA	FRA-OFR-PS-VL40XX-	6	2
OFR	GBR	GBR-OFR-HOK-VL40XX-NGI	5	3
OFR	LTU	LTU-OFR-DTS-VL2440-	1	
OFR	LTU	LTU-OFR-TM-VL40XX-	3	2
OFR	PRT	PRT-OFR-HOK-VL0010-P2	2	1
OFR	PRT	PRT-OFR-HOK-VL1218-P2	2	1

AREA	MS	Fleet Segment Code	Number of assessed stocks (2015)	Number of overfished stocks (2015)
OFR	PRT	PRT-OFR-HOK-VL1824-P2	2	1
OFR	PRT	PRT-OFR-HOK-VL2440-IWE	10	6
OFR	PRT	PRT-OFR-HOK-VL2440-P2	4	3
OFR	PRT	PRT-OFR-HOK-VL40XX-IWE	6	3
OFR	PRT	PRT-OFR-MGP-VL0010-P2	2	1
OFR	PRT	PRT-OFR-MGP-VL1012-P2	2	1
OFR	PRT	PRT-OFR-MGP-VL1824-P2	1	1

13 Annex IV – Biological Indicator Stock Reference List

The reference list shown below is currently used to divide commercial landings data at species level into stocks; see section xx for further details. Stocks that are not divided are not included in the list. The resulting stock ladings data were used in the calculation of the SHI and SAR indicator values for consideration by EWG 17-08.

species_code	fishstock	sub_region	splitting_values
ANE	ane-gsa17_18-GFCM	SA 17	2
ANE	ane-gsa17_18	SA 17	2
ANE	ane-gsa17_18	SA 18	2
ANE	ane-gsa17_18-GFCM	SA 18	2
ANF	ank.27.78ab	27.7.B	3.312183121
ANF	mon.27.78ab	27.7.B	1.432491696
ANF	ank.27.78ab	27.7.C	3.312183121
ANF	mon.27.78ab	27.7.C	1.432491696
ANF	mon.27.78ab	27.7.C.1	1.432491696
ANF	ank.27.78ab	27.7.C.1	3.312183121
ANF	ank.27.78ab	27.7.C.2	3.312183121
ANF	mon.27.78ab	27.7.C.2	1.432491696
ANF	ank.27.78ab	27.7.D	3.312183121
ANF	mon.27.78ab	27.7.D	1.432491696
ANF	ank.27.78ab	27.7.E	3.312183121
ANF	mon.27.78ab	27.7.E	1.432491696
ANF	ank.27.78ab	27.7.F	3.312183121
ANF	mon.27.78ab	27.7.F	1.432491696
ANF	ank.27.78ab	27.7.G	3.312183121
ANF	mon.27.78ab	27.7.G	1.432491696
ANF	mon.27.78ab	27.7.H	1.432491696
ANF	ank.27.78ab	27.7.H	3.312183121
ANF	mon.27.78ab	27.7.J	1.432491696
ANF	ank.27.78ab	27.7.J	3.312183121
ANF	mon.27.78ab	27.7.J.1	1.432491696
ANF	ank.27.78ab	27.7.J.1	3.312183121
ANF	ank.27.78ab	27.7.J.2	3.312183121
ANF	mon.27.78ab	27.7.J.2	1.432491696
ANF	mon.27.78ab	27.7.K	1.432491696
ANF	ank.27.78ab	27.7.K	3.312183121
ANF	mon.27.78ab	27.7.K.1	1.432491696
ANF	ank.27.78ab	27.7.K.1	3.312183121
ANF	mon.27.78ab	27.7.K.2	1.432491696
ANF	ank.27.78ab	27.7.K.2	3.312183121
ANF	ank.27.78ab	27.8.A	3.312183121
ANF	mon.27.78ab	27.8.A	1.432491696
ANF	mon.27.78ab	27.8.B	1.432491696

species_code	fishstock	sub_region	splitting_values
ANF	ank.27.78ab	27.8.B	3.312183121
ANF	mon.27.8c9a	27.8.C	1.627202445
ANF	ank.27.8c9a	27.8.C	2.594381539
ANF	mon.27.78ab	27.8.D	1.432491696
ANF	ank.27.78ab	27.8.D	3.312183121
ANF	ank.27.78ab	27.8.D.1	3.312183121
ANF	mon.27.78ab	27.8.D.1	1.432491696
ANF	ank.27.78ab	27.8.D.2	3.312183121
ANF	mon.27.78ab	27.8.D.2	1.432491696
ANF	ank.27.8c9a	27.9.A	2.594381539
ANF	mon.27.8c9a	27.9.A	1.627202445
CAP	cap.27.2a514	27.2.A	1.529924693
CAP	cap.27.1-2	27.2.A	2.887060583
CAP	cap.27.2a514	27.2.A.1	1.529924693
CAP	cap.27.1-2	27.2.A.1	2.887060583
CAP	cap.27.1-2	27.2.A.2	2.887060583
CAP	cap.27.2a514	27.2.A.2	1.529924693
COD	cod.27.1-2	27.1.A	1.037232046
COD	cod.27.1-2coast	27.1.A	27.85858273
COD	cod.27.1-2coast	27.1.B	27.85858273
COD	cod.27.1-2	27.1.B	1.037232046
COD	cod.27.1-2	27.2.A	1.037232046
COD	cod.27.1-2coast	27.2.A	27.85858273
COD	cod.27.1-2coast	27.2.A.1	27.85858273
COD	cod.27.1-2	27.2.A.1	1.037232046
COD	cod.27.1-2coast	27.2.A.2	27.85858273
COD	cod.27.1-2	27.2.A.2	1.037232046
COD	cod.27.1-2coast	27.2.B	27.85858273
COD	cod.27.1-2	27.2.B	1.037232046
COD	cod.27.1-2coast	27.2.B.1	27.85858273
COD	cod.27.1-2	27.2.B.1	1.037232046
COD	cod.27.1-2coast	27.2.B.2	27.85858273
COD	cod.27.1-2	27.2.B.2	1.037232046
COD	cod.27.47d20	27.3.A	1.004057192
COD	cod.27.21	27.3.A	247.4759036
COD	cod.27.5b1	27.5.B	1.014311422
COD	cod.27.5b2	27.5.B	70.87426036
DPS	dps-gsa09_10_11	SA 10	2
DPS	dps-gsa10	SA 10	2
DPS	dps-gsa17_18	SA 17	2
DPS	dps-gsa17_18_19	SA 17	2
DPS	dps-gsa17_18	SA 18	2
DPS	dps-gsa17_18_19	SA 18	2

species_code	fishstock	sub_region	splitting_values
DPS	dps-gsa19	SA 19	2
DPS	dps-gsa17_18_19	SA 19	2
DPS	dps-gsa09_10_11	SA 9	2
DPS	dps-gsa09	SA 9	2
HER	her.27.3a47d	27.3.A	1.094915988
HER	her.27.20-24	27.3.A	11.53563289
HER	her.27.28	27.3.D.28	6.500233372
HER	her.27.25-2932	27.3.D.28	1.181810467
HER	her.27.1-24a514a	27.4.A	1.617849625
HER	her.27.3a47d	27.4.A	2.618516802
HER	her.27.5a	27.5.A	12.80880416
HER	her.27.1-24a514a	27.5.A	1.08468258
HER	her.27.1-24a514a	27.5.A.1	1.08468258
HER	her.27.5a	27.5.A.1	12.80880416
HER	her.27.5a	27.5.A.2	12.80880416
HER	her.27.1-24a514a	27.5.A.2	1.08468258
HER	her.27.irls	27.7.A	1.312400806
HER	her.27.nirs	27.7.A	4.201016069
HKE	hke-gsa01	SA 1	3
HKE	hke-gsa01_03	SA 1	3
HKE	hke-gsa01_05_06_07	SA 1	3
HKE	hke-gsa10	SA 10	2
HKE	hke-gsa09_10_11	SA 10	2
HKE	hke-gsa17_18	SA 18	2
HKE	hke-gsa18	SA 18	2
HKE	hke-gsa05	SA 5	2
HKE	hke-gsa01_05_06_07	SA 5	2
HKE	hke-gsa06	SA 6	2
HKE	hke-gsa01_05_06_07	SA 6	2
HKE	hke-gsa07	SA 7	2
HKE	hke-gsa01_05_06_07	SA 7	2
HKE	hke-gsa09_10_11	SA 9	2
HKE	hke-gsa09	SA 9	2
LEZ	meg.27.8c9a	27.8.C	5.358437146
LEZ	ldb.27.8c9a	27.8.C	1.229440042
LEZ	ldb.27.8c9a	27.9.A	1.229440042
LEZ	meg.27.8c9a	27.9.A	5.358437146
MNZ	ank.27.78ab	27.7.B	3.312183121
MNZ	mon.27.78ab	27.7.B	1.432491696
MNZ	ank.27.78ab	27.7.C	3.312183121
MNZ	mon.27.78ab	27.7.C	1.432491696
MNZ	ank.27.78ab	27.7.C.1	3.312183121
MNZ	mon.27.78ab	27.7.C.1	1.432491696

species_code	fishstock	sub_region	splitting_values
MNZ	ank.27.78ab	27.7.C.2	3.312183121
MNZ	mon.27.78ab	27.7.C.2	1.432491696
MNZ	ank.27.78ab	27.7.D	3.312183121
MNZ	mon.27.78ab	27.7.D	1.432491696
MNZ	mon.27.78ab	27.7.E	1.432491696
MNZ	ank.27.78ab	27.7.E	3.312183121
MNZ	mon.27.78ab	27.7.F	1.432491696
MNZ	ank.27.78ab	27.7.F	3.312183121
MNZ	mon.27.78ab	27.7.G	1.432491696
MNZ	ank.27.78ab	27.7.G	3.312183121
MNZ	ank.27.78ab	27.7.H	3.312183121
MNZ	mon.27.78ab	27.7.H	1.432491696
MNZ	mon.27.78ab	27.7.J	1.432491696
MNZ	ank.27.78ab	27.7.J	3.312183121
MNZ	mon.27.78ab	27.7.J.1	1.432491696
MNZ	ank.27.78ab	27.7.J.1	3.312183121
MNZ	ank.27.78ab	27.7.J.2	3.312183121
MNZ	mon.27.78ab	27.7.J.2	1.432491696
MNZ	ank.27.78ab	27.7.K	3.312183121
MNZ	mon.27.78ab	27.7.K	1.432491696
MNZ	ank.27.78ab	27.7.K.1	3.312183121
MNZ	mon.27.78ab	27.7.K.1	1.432491696
MNZ	mon.27.78ab	27.7.K.2	1.432491696
MNZ	ank.27.78ab	27.7.K.2	3.312183121
MNZ	ank.27.78ab	27.8.A	3.312183121
MNZ	mon.27.78ab	27.8.A	1.432491696
MNZ	mon.27.78ab	27.8.B	1.432491696
MNZ	ank.27.78ab	27.8.B	3.312183121
MNZ	ank.27.8c9a	27.8.C	2.594381539
MNZ	mon.27.8c9a	27.8.C	1.627202445
MNZ	ank.27.78ab	27.8.D	3.312183121
MNZ	mon.27.78ab	27.8.D	1.432491696
MNZ	mon.27.78ab	27.8.D.1	1.432491696
MNZ	ank.27.78ab	27.8.D.1	3.312183121
MNZ	ank.27.78ab	27.8.D.2	3.312183121
MNZ	mon.27.78ab	27.8.D.2	1.432491696
MNZ	ank.27.8c9a	27.9.A	2.594381539
MNZ	mon.27.8c9a	27.9.A	1.627202445
MNZ	ank-gsa05	SA 5	2
MNZ	mon-gsa01_05_06_07	SA 5	2
MNZ	ank-gsa06	SA 6	2
MNZ	mon-gsa01_05_06_07	SA 6	2
MON	ank.27.78ab	27.7.B	3.312183121

species_code	fishstock	sub_region	splitting_values
MON	mon.27.78ab	27.7.B	1.432491696
MON	mon.27.78ab	27.7.C	1.432491696
MON	ank.27.78ab	27.7.C	3.312183121
MON	mon.27.78ab	27.7.C.1	1.432491696
MON	ank.27.78ab	27.7.C.1	3.312183121
MON	ank.27.78ab	27.7.C.2	3.312183121
MON	mon.27.78ab	27.7.C.2	1.432491696
MON	mon.27.78ab	27.7.D	1.432491696
MON	ank.27.78ab	27.7.D	3.312183121
MON	mon.27.78ab	27.7.E	1.432491696
MON	ank.27.78ab	27.7.E	3.312183121
MON	ank.27.78ab	27.7.F	3.312183121
MON	mon.27.78ab	27.7.F	1.432491696
MON	mon.27.78ab	27.7.G	1.432491696
MON	ank.27.78ab	27.7.G	3.312183121
MON	ank.27.78ab	27.7.H	3.312183121
MON	mon.27.78ab	27.7.H	1.432491696
MON	ank.27.78ab	27.7.J	3.312183121
MON	mon.27.78ab	27.7.J	1.432491696
MON	mon.27.78ab	27.7.J.1	1.432491696
MON	ank.27.78ab	27.7.J.1	3.312183121
MON	mon.27.78ab	27.7.J.2	1.432491696
MON	ank.27.78ab	27.7.J.2	3.312183121
MON	mon.27.78ab	27.7.K	1.432491696
MON	ank.27.78ab	27.7.K	3.312183121
MON	ank.27.78ab	27.7.K.1	3.312183121
MON	mon.27.78ab	27.7.K.1	1.432491696
MON	ank.27.78ab	27.7.K.2	3.312183121
MON	mon.27.78ab	27.7.K.2	1.432491696
MON	ank.27.78ab	27.8.A	3.312183121
MON	mon.27.78ab	27.8.A	1.432491696
MON	ank.27.78ab	27.8.B	3.312183121
MON	mon.27.78ab	27.8.B	1.432491696
MON	mon.27.78ab	27.8.D	1.432491696
MON	ank.27.78ab	27.8.D	3.312183121
MON	mon.27.78ab	27.8.D.1	1.432491696
MON	ank.27.78ab	27.8.D.1	3.312183121
MON	ank.27.78ab	27.8.D.2	3.312183121
MON	mon.27.78ab	27.8.D.2	1.432491696
MTS	mts-gsa17	SA 17	2
MTS	mts-gsa17_18	SA 17	2
MTS	mts-gsa17_18	SA 18	2
MTS	mts-gsa18	SA 18	2

species_code	fishstock	sub_region	splitting_values
MUT	mut-gsa17	SA 17	2
MUT	mut-gsa17_18	SA 17	2
MUT	mut-gsa17_18	SA 18	2
MUT	mut-gsa18	SA 18	2
NEP	nep.fu.10	27.4.A	272.6566265
NEP	nep.fu.9	27.4.A	6.311672012
NEP	nep.fu.7	27.4.A	1.249475486
NEP	nep.fu.32	27.4.A	26.62411765
NEP	nep.fu.6	27.4.B	3.033440033
NEP	nep.fu.33	27.4.B	7.211787565
NEP	nep.fu.34	27.4.B	16.06202669
NEP	nep.fu.5	27.4.B	6.157036218
NEP	nep.fu.8	27.4.B	3.257276583
NEP	nep.fu.11	27.6.A	4.145945946
NEP	nep.fu.12	27.6.A	3.470112421
NEP	nep.fu.13	27.6.A	2.124832102
NEP	nep.fu.19	27.7.A	16.25077801
NEP	nep.fu.15	27.7.A	1.127397359
NEP	nep.fu.14	27.7.A	19.4303876
NEP	nep.fu.17	27.7.B	2.361516588
NEP	nep.fu.16	27.7.B	1.734475077
NEP	nep.fu.2021	27.7.G	2.902291035
NEP	nep.fu.19	27.7.G	7.194761411
NEP	nep.fu.22	27.7.G	1.936278615
NEP	nep.fu.19	27.7.J	2.862551867
NEP	nep.fu.16	27.7.J	1.5368978
NEP	nep.fu.16	27.7.J.1	1.5368978
NEP	nep.fu.19	27.7.J.1	2.862551867
NEP	nep.fu.16	27.7.J.2	1.5368978
NEP	nep.fu.19	27.7.J.2	2.862551867
NEP	nep.fu.31	27.8.C	3.813953488
NEP	nep.fu.25	27.8.C	1.355371901
NEP	nep.fu.30	27.9.A	4.945595855
NEP	nep.fu.2627	27.9.A	29.36923077
NEP	nep.fu.2829	27.9.A	1.309327846
PIL	pil-gsa01	SA 1	2
PIL	pil-gsa01-03	SA 1	2
PIL	pil-gsa17_18-GFCM	SA 17	2
PIL	pil-gsa17_18	SA 17	2
PIL	pil-gsa17_18	SA 18	2
PIL	pil-gsa17_18-GFCM	SA 18	2
PIL	pil-gsa06-GFCM	SA 6	2
PIL	pil-gsa06	SA 6	2

species_code	fishstock	sub_region	splitting_values
PLE	ple.27.21-23	27.3.A	40.32549853
PLE	ple.27.420	27.3.A	1.025428794
REB	reb.2127.dp	21.1	1.08092383
REB	reb.2127.sp	21.1	13.3572995
REB	reb.2127.sp	21.2	13.3572995
REB	reb.2127.dp	21.2	1.08092383
REB	reb.2127.dp	27.12.A	1.08092383
REB	reb.2127.sp	27.12.A	13.3572995
REB	reb.2127.sp	27.12.A.1	13.3572995
REB	reb.2127.dp	27.12.A.1	1.08092383
REB	reb.2127.sp	27.12.A.2	13.3572995
REB	reb.2127.dp	27.12.A.2	1.08092383
REB	reb.2127.dp	27.12.A.3	1.08092383
REB	reb.2127.sp	27.12.A.3	13.3572995
REB	reb.2127.dp	27.12.A.4	1.08092383
REB	reb.2127.sp	27.12.A.4	13.3572995
REB	reb.2127.sp	27.12.B	13.3572995
REB	reb.2127.dp	27.12.B	1.08092383
REB	reb.2127.sp	27.12.C	13.3572995
REB	reb.2127.dp	27.12.C	1.08092383
REB	reb.27.5a14	27.14.A	4.711986883
REB	reb.2127.sp	27.14.A	16.95572264
REB	reb.2127.dp	27.14.A	1.372122011
REB	reb.2127.sp	27.14.B	18.91781537
REB	reb.2127.dp	27.14.B	1.530902069
REB	reb.27.14b	27.14.B	9.64165203
REB	reb.27.5a14	27.14.B	5.257251476
REB	reb.27.5a14	27.14.B.1	5.257251476
REB	reb.27.14b	27.14.B.1	9.64165203
REB	reb.2127.dp	27.14.B.1	1.530902069
REB	reb.2127.sp	27.14.B.1	18.91781537
REB	reb.27.14b	27.14.B.2	9.64165203
REB	reb.2127.dp	27.14.B.2	1.530902069
REB	reb.27.5a14	27.14.B.2	5.257251476
REB	reb.2127.sp	27.14.B.2	18.91781537
REB	reb.2127.sp	27.5.A	16.95572264
REB	reb.27.5a14	27.5.A	4.711986883
REB	reb.2127.dp	27.5.A	1.372122011
REB	reb.2127.sp	27.5.A.1	16.95572264
REB	reb.27.5a14	27.5.A.1	4.711986883
REB	reb.2127.dp	27.5.A.1	1.372122011
REB	reb.2127.dp	27.5.A.2	1.372122011
REB	reb.2127.sp	27.5.A.2	16.95572264

species_code	fishstock	sub_region	splitting_values
REB	reb.27.5a14	27.5.A.2	4.711986883
REB	reb.2127.dp	27.5.B	1.08092383
REB	reb.2127.sp	27.5.B	13.3572995
REB	reb.2127.sp	27.5.B.1	13.3572995
REB	reb.2127.dp	27.5.B.1	1.08092383
REB	reb.2127.sp	27.5.B.1.A	13.3572995
REB	reb.2127.dp	27.5.B.1.A	1.08092383
REB	reb.2127.sp	27.5.B.1.B	13.3572995
REB	reb.2127.dp	27.5.B.1.B	1.08092383
REB	reb.2127.sp	27.5.B.2	13.3572995
REB	reb.2127.dp	27.5.B.2	1.08092383
RED	reb.2127.sp	21.1	13.3572995
RED	reb.2127.dp	21.1	1.08092383
RED	reb.2127.sp	21.2	13.3572995
RED	reb.2127.dp	21.2	1.08092383
RED	reb.27.1-2	27.1.A	1.258283539
RED	reg.27.1-2	27.1.A	4.871714018
RED	reg.27.1-2	27.1.B	4.871714018
RED	reb.27.1-2	27.1.B	1.258283539
RED	reb.2127.dp	27.12.A	2.284019318
RED	reb.2127.sp	27.12.A	28.22431078
RED	reg.27.561214	27.12.A	1.898452234
RED	reb.2127.dp	27.12.A.1	2.284019318
RED	reg.27.561214	27.12.A.1	1.898452234
RED	reb.2127.sp	27.12.A.1	28.22431078
RED	reb.2127.sp	27.12.A.2	28.22431078
RED	reb.2127.dp	27.12.A.2	2.284019318
RED	reg.27.561214	27.12.A.2	1.898452234
RED	reg.27.561214	27.12.A.3	1.898452234
RED	reb.2127.sp	27.12.A.3	28.22431078
RED	reb.2127.dp	27.12.A.3	2.284019318
RED	reb.2127.sp	27.12.A.4	28.22431078
RED	reb.2127.dp	27.12.A.4	2.284019318
RED	reg.27.561214	27.12.A.4	1.898452234
RED	reg.27.561214	27.12.B	1.898452234
RED	reb.2127.sp	27.12.B	28.22431078
RED	reb.2127.dp	27.12.B	2.284019318
RED	reg.27.561214	27.12.C	1.898452234
RED	reb.2127.sp	27.12.C	28.22431078
RED	reb.2127.dp	27.12.C	2.284019318
RED	reb.2127.dp	27.14.A	2.284019318
RED	reb.2127.sp	27.14.A	28.22431078
RED	reg.27.561214	27.14.A	1.898452234

species_code	fishstock	sub_region	splitting_values
RED	reg.27.561214	27.14.B	1.898452234
RED	reb.2127.dp	27.14.B	2.284019318
RED	reb.2127.sp	27.14.B	28.22431078
RED	reb.2127.sp	27.14.B.1	28.22431078
RED	reb.2127.dp	27.14.B.1	2.284019318
RED	reg.27.561214	27.14.B.1	1.898452234
RED	reg.27.561214	27.14.B.2	1.898452234
RED	reb.2127.dp	27.14.B.2	2.284019318
RED	reb.2127.sp	27.14.B.2	28.22431078
RED	reg.27.1-2	27.2.A	4.871714018
RED	reb.27.1-2	27.2.A	1.258283539
RED	reg.27.1-2	27.2.A.1	4.871714018
RED	reb.27.1-2	27.2.A.1	1.258283539
RED	reb.27.1-2	27.2.A.2	1.258283539
RED	reg.27.1-2	27.2.A.2	4.871714018
RED	reb.27.1-2	27.2.B	1.258283539
RED	reg.27.1-2	27.2.B	4.871714018
RED	reb.27.1-2	27.2.B.1	1.258283539
RED	reg.27.1-2	27.2.B.1	4.871714018
RED	reb.27.1-2	27.2.B.2	1.258283539
RED	reg.27.1-2	27.2.B.2	4.871714018
RED	reb.2127.sp	27.5.A	28.22431078
RED	reb.2127.dp	27.5.A	2.284019318
RED	reg.27.561214	27.5.A	1.898452234
RED	reg.27.561214	27.5.A.1	1.898452234
RED	reb.2127.sp	27.5.A.1	28.22431078
RED	reb.2127.dp	27.5.A.1	2.284019318
RED	reb.2127.dp	27.5.A.2	2.284019318
RED	reg.27.561214	27.5.A.2	1.898452234
RED	reb.2127.sp	27.5.A.2	28.22431078
RED	reb.2127.sp	27.5.B	28.22431078
RED	reg.27.561214	27.5.B	1.898452234
RED	reb.2127.dp	27.5.B	2.284019318
RED	reb.2127.dp	27.5.B.1	2.284019318
RED	reb.2127.sp	27.5.B.1	28.22431078
RED	reg.27.561214	27.5.B.1	1.898452234
RED	reb.2127.dp	27.5.B.1.A	2.284019318
RED	reg.27.561214	27.5.B.1.A	1.898452234
RED	reb.2127.sp	27.5.B.1.A	28.22431078
RED	reb.2127.dp	27.5.B.1.B	2.284019318
RED	reb.2127.sp	27.5.B.1.B	28.22431078
RED	reg.27.561214	27.5.B.1.B	1.898452234
RED	reb.2127.sp	27.5.B.2	28.22431078

species_code	fishstock	sub_region	splitting_values
RED	reb.2127.dp	27.5.B.2	2.284019318
RED	reg.27.561214	27.5.B.2	1.898452234
RNG	rng.27.1245a8914ab	27.14.B	23.74534161
RNG	rng.27.5a10b12ac14b	27.14.B	1.043965046
RNG	rng.27.5a10b12ac14b	27.5.A	1.043965046
RNG	rng.27.1245a8914ab	27.5.A	23.74534161
SAN	san.sa.3r	27.3.A	1.002389178
SAN	san.sa.6	27.3.A	419.5540098
SAN	san.sa.3r	27.4.A	1.033540382
SAN	san.sa.4	27.4.A	30.81480618
SAN	san.sa.4	27.4.B	66242.01306
SAN	san.sa.2r	27.4.B	9230.920784
SAN	san.sa.1r	27.4.B	1.000573846
SAN	san.sa.3r	27.4.B	2221.782448
SAN	san.sa.1r	27.4.C	1.000108394
SAN	san.sa.2r	27.4.C	9226.626696
USK	usk.27.3a45b6a7-912b	27.6.B	1.046531386
USK	usk.27.6b	27.6.B	22.49087079
USK	usk.27.3a45b6a7-912b	27.6.B.1	1.046531386
USK	usk.27.6b	27.6.B.1	22.49087079
USK	usk.27.6b	27.6.B.2	22.49087079
USK	usk.27.3a45b6a7-912b	27.6.B.2	1.046531386

14 ANNEX V – SAR STOCK SELECTION

FAO Species Code	Species Name	Stock Code	Stock Description	SAR	Criteria
BTH	Alopidae		51, 57	TRUE	c
ALV	Alopidae		51, 57	TRUE	c
PTH	Alopidae		51, 57	TRUE	c
THR	Alopidae		51, 57	TRUE	c
ANE	Anchovy	ane.27.8	27.8	FALSE	a
ANE	Anchovy	ane-gsa07	GSA7	TRUE	b
ANE	Anchovy	ane-gsa17	GSA17	TRUE	b
ANE	Anchovy	ane-gsa07	Anchovy in GSA 7	FALSE	b
AGN	Angel shark	agn-nea	North Eat Atlantic 27	TRUE	cd
SAL	Atlantic salmon	sal.27.22-31	Subdivisions 22-31	FALSE	b
SAL	Atlantic salmon	sal.27.32	Subdivision 32	FALSE	b
BSK	Basking shark	bsk.27.nea	North Eat Atlantic 27 + Med 37	TRUE	d
REB	Beaked redfish	reb.27.1-2	V, XII, XIV,nafo1-2 shalow+deep (Sebastes mantela)	TRUE	b
REB		reb.2127.sp	V, XII, XIV,nafo1-2 shalow+deep (Sebastes mantela)	TRUE	b
REB		reb.2127.dp	V, XII, XIV,nafo1-2 shalow+deep (Sebastes mantela)	TRUE	b
REB		reb.27.14b	V, XII, XIV,nafo1-2 shalow+deep (Sebastes mantela)	TRUE	b
REB		reb.27.5a14	V, XII, XIV,nafo1-2 shalow+deep (Sebastes mantela)	TRUE	b
BTH	Bigeye Thresher Shark		all waters	TRUE	c
DCA	Birdbeack dogfish		I,IIa, IV, XIV	TRUE	c
CFB	Black dogfish			TRUE	c
RBC	Blackchin guitarfish		all 37	TRUE	c
BLI	Blue Ling	bli.27.5b67	Vb, VI, VII	FALSE	ab
BLI	Blue Ling	bli.nea	IIIa, Iva, I, II, VIII, IX, XII	TRUE	b
BLI	Blue Ling	bli.27.5a14	Va XIV (East Greenland and Iceland grounds)	FALSE	b
BFT	Bluefin tuna	bft	Mediterranean	FALSE	b
BFT	Bluefin tuna	bft	Atlantic Ocean east of longitude 45° W	FALSE	b
SBL	Bluntnose sixgill shark			TRUE	c
MPO	Bull Ray		27.9, 34.1.1,	TRUE	d

FAO Species Code	Species Name	Stock Code	Stock Description	SAR	Criteria
			34.1.2, 37		
CAP	Capelin	cap.27.1-2	Northeast Arctic excluding Division 2.a west of 5°W	TRUE	a
CAP	Capelin	cap.27.2a514	Subareas 5 and 14 and Division 2.a west of 5°W (Iceland and Faroes grounds, East Greenland, Jan Mayen area)	FALSE	b
COD	Cod	cod.27.22-24	Cod (Gadus morhua) in Subdivisions 22-24 (Western Baltic Sea)	TRUE	a
COD	Cod	cod.27.47d20	IIIa (exc. Skagerrak and Kattegat), IV, VIIb	FALSE	a
COD	Cod	cod.27.7e-k	VIIe-k	FALSE	a
COD	Cod	cod.27.6a	VIa	TRUE	a
COD	Cod	cod.27.5.B.1	Vb (Faroes waters)	TRUE	ab
COD	Cod	cod.27.7a	VIIa	TRUE	ab
COD	Cod	cod.2127.1f14	ICES Subarea 14 and NAFO Division 1.F (East Greenland, South Greenland)	TRUE	b
RBX	Common guitarfish		all 37	TRUE	c
RJB	Comon skate Complex		IIa, III, IV, VI, VII, VIII,IX, X	TRUE	c
HMZ	Cunene horse mackerel		all 34	TRUE	b
ELE	European eel	ele.2737.nea	North Eat Atlantic 27	TRUE	d
ELE	European eel	ele-med	Med 37	TRUE	d
HXC	Frilled shark		all waters	TRUE	c
RMB	Giant Manta		all waters	TRUE	c
REG	Golden redfish	reg.27.1-2	I, II (Northeast Arctic) (Sebastes norvegicus)	TRUE	b
RED		reg.27.1-2	I, II (Northeast Arctic) (Sebastes norvegicus)	TRUE	b
API	Gost catshark		all waters	TRUE	c
ETR	Great lanternshark		I,IIa, IV, XIV	TRUE	c
WSH	Great White shark		27.7-9, 31, 34, 37, 41, 51, 56	TRUE	d
GSK	Greenland Shark		27.5, 27.6, 27.7, 27.9, 27.10	TRUE	c
GTF, RHH, RBE, RBC,GUD, GUF, RBO, RBU, RBS, RBL, RBP, RBX, RBZ, RBR, RBT,	Guitarfishes		I, II, III, IV, V, VI, VII, VIII, IX, X and XII	TRUE	c

FAO Species Code	Species Name	Stock Code	Stock Description	SAR	Criteria
GUZ, RZE					
CWO	Gulper Shark			TRUE	c
HAD	Haddock	had-346a	III, IV, VIa	FALSE	a
HAD	Haddock	had.27.5b	Vb (Faroese waters)	TRUE	a
HAD	Haddock	had.27.6b	Vib (Rockall)	FALSE	a
SPZ, SPN, SPK	Hamerheads Sharks		all waters	TRUE	d
HER	Herring	her.27.20-24	IIIa and Division 22-24 (Western Baltic Sea)	FALSE	a
HER	Herring	her.27.28	Gulf of Riga 28.1	FALSE	a
HER	Herring	her.27.25-2932	25-32	FALSE	a
HER	Herring	her.27.6a7bc	Via, VIIIbc	TRUE	a
HOM, JAX	Horse makerel	hom.27.2a4a5b6a7a-ce-k8	Horse mackerel (Trachurus trachurus) in Divisions IIa. IVa. Vb. VIa. VIIa-c. e-k. VIII (Western stock)	TRUE	b
SCK	Kitefin Shark		I,IIa, IV, XIV	TRUE	c
SYR	Knifetooth dogfish			TRUE	c
GUQ	Leaf-scale gluper shark	guq.27.nea	North Eat Atlantic 27	TRUE	c
CYP	Longnose velvet dogfish			TRUE	c
JAM	Maltese Ray		all 37	TRUE	cd
RMB	Giant Manta		all waters	TRUE	cd
RME	Longhorned mobula		all waters	TRUE	c
RMH	Lesser devil ray		all waters	TRUE	c
RMJ	Spinetail mobula		all waters	TRUE	c
RMK	Shortfin devil ray		all waters	TRUE	c
RMM	Giant Devil Ray		all waters	TRUE	c
RMO	Smoothtail mobula		all waters	TRUE	c
RMR	Atlantic Devilray		all waters	TRUE	c
RMT	Chilean devil ray		all waters	TRUE	c
RMU	Munk's devil ray		all waters	TRUE	c
RMV	Mobula nei		all waters	TRUE	c
GAM	Mousse catshark		all waters	TRUE	c
NEP	Nephrops	nep-8de	VIIIde	FALSE	b
NEP	Nephrops	nep-2627	IXa (FU 26 27)	TRUE	b
NEP	Nephrops	nep25-31	VIIIc (FU 25+ 31)	TRUE	b
PRA	Northern Shrimp	pra.27.4a20	27.4.A.20	FALSE	a
JAD	Norvegian Skate	JAD	VIa, VIb, VIIa-c, VIIefghk	TRUE	b
JAD	Norvegian Skate		VIa, VIb, VIIa-c, VIIefghk	TRUE	c
OSC	Oceanic White Tip		all waters	TRUE	cd
ORY	Orange rougthy	ory.comb	North Eat Atlantic 27	TRUE	b
ORY	Orange rougthy	ory-sea	South Est Atlantic 47	TRUE	b
PLE	Plaice	ple-eche	Plaice in Division	FALSE	a

FAO Species Code	Species Name	Stock Code	Stock Description	SAR	Criteria
			VIId (Eastern Channel)		
PLE	Plaice	ple-celt	VIIfg	FALSE	a
PLE	Plaice	ple-echew	VIIe (Western English Channel)	TRUE	a
POL	Pollack	pol3a4	IV (North Sea) and Division IIIa (Skagerrak–Kattegat)	TRUE	b
POR	Porbeagle	por.27.nea, por.nwa, por.sea, por.swa, por.med	nea, nwa, sea, swa, med	TRUE	cd
CYO	Portuguese dogfish	cyo.27.nea	North Eat Atlantic 27	TRUE	c
SBR	Red seabream	sbr-678	subareas 6, 7, and 8 (Celtic Seas and the English Channel, Bay of Biscay)	TRUE	b
SBR	Red seabream	sbr-9	IX	FALSE	b
RNG	Round nose Grenadier	rng-kask	IIIa	TRUE	b
OXN	Sailfin roughshark			TRUE	c
POK	Saithe	pok.27.5b	Vb (Faroese waters)	TRUE	a
POK	Saithe	pok.27.1-2	I, II	FALSE	a
POK	Saithe	pok.27.3a46	IIIa, IV, VI	FALSE	a
CCT	Sand Tiger Shark		34.1.1, 34.1.2, 37	TRUE	d
SAN	Sandeel	san.sa.1r	North Sea Dogger Bank (SA 1)	FALSE	a
SAN	Sandeel	san.sa.2r	South Eastern North Sea (SA 2)	FALSE	a
SAN	Sandeel	san.sa.3r	Central Eastern North Sea (SA 3)	FALSE	a
SAN	Sandeel	san.sa.7	Shetland Area (SA 7)	TRUE	b
SAN	Sandeel	san.sa.5r	Bergen Bank Area (SA 5)	TRUE	b
SAN	Sandeel	san.sa.6	Division IIIa East (Kattegat) (SA 6)	FALSE	b
SAN	Sandeel	san.sa.4	Northern and Central North Sea	TRUE	b
RJI	Sandy ray		all 37	TRUE	c
PIL	Sardine	sar-soth	27.8c, 27.9a	FALSE	b
PIL	Sardine	pil-gsa06	GSA 6	TRUE	b
SUA	Sawback angelshark		27.9, 34.1.1, 34.1.2, 37	TRUE	d
SAW	Sawfishes nei		all waters	TRUE	d
RPA	Narrow sawfish		all waters	TRUE	d
RPC	Dwarf sawfish		all waters	TRUE	d
RPM	Largetooth sawfish		all waters	TRUE	d
RPZ	Smalltooth sawfish		all waters	TRUE	d
RPP	Green sawfish		all waters	TRUE	d
BSS	Sea bass	bss.27.47	27.4.B, 27.4.C, 27.7.A, 27.7.D, 27.E, 27.7.F, 27.7.G, 27.H	FALSE	a

FAO Species Code	Species Name	Stock Code	Stock Description	SAR	Criteria
PAN	Shrimp	PAN	NAFO 3LMNO	TRUE	b
FAL	Silky Shark		21, 27, 31, 34, 37, 41, 47, 48	TRUE	c
LOO	Smalltooth sand tiger		21.1, 27.8, 27.9, 27.10, 34.1.1, 34.1.2, 37	TRUE	d
ETP	Smooth Lantern Shark		IIa, III, IV, VI, VII, VIII,IX, X	TRUE	c
SUT	Smoothback angelshark		27.9, 34, 37, 47	TRUE	d
SOL	Sole	sol.27.7a	Sole in Division VIIa (Irish Sea)	TRUE	a
SOL	Sole	sol.27.8ab	Sole in Division VIIIab	FALSE	a
SOL	Sole	sol.27.20-24	Sole (Solea solea) in subdivisions 20–24	FALSE	a
SBF	Southern Blufin Tuna		47.C.,47.D, 51.6, 51.7, 51.8, 58, 57.2, 57.3, 57.4, 57.5, 57.6, 81	TRUE	d
RGL	Spiny butterfly ray		27.8c, 27.9, 34.1.1, 34.1.2, 37	TRUE	d
DGS	Spiny dogfish	dgs.27.nea	I, IIa, IIIa,V, VI, VII, VIII, XII, XIV	TRUE	b
DGS	Spiny Dogfish	dgs-sa29	GSA 29	TRUE	b
RJR	Starry Ray	rjr-234	IIa, IIIa, IV, VIId	TRUE	bc
AAE	Strugeon		all 37	TRUE	d
AAN	Strugeon		all 37	TRUE	d
SWO	Swordfish	swo-med	all 37	TRUE	a
RJC	Thornback Ray	rjc-celt	27.3a	TRUE	c
GAG	Tope Shark	gag.27.nea	with LL, IIa, III, IV, VI, VII, VIII,IX, X	TRUE	c
GAG	Tope Shark	gag.med	all 37 with LL, bottom set net and tuna trap	TRUE	c
TUR	Turbot	tur-gsa29	Black Sea	TRUE	bc
USK	Tusk	usk.27.12ac	27.12.A, 27.12.C	TRUE	b

15 List of Annexes

Electronic annexes are published on the meeting's web site on:
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List of electronic annexes documents:

EWG-17-XX – Annex 1 - XXXXX
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16 List of Background Documents

Background documents are published on the meeting's web site on:
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List of background documents:

EWG-17-XX – Doc 1 - Declarations of invited and JRC experts (see also section XX of this report – List of participants)
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