JRC SCIENCE FOR POLICY REPORT

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-20-11)

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ABSTRACT

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, based on DCF information and in line with the Commission Guidelines. Using data submitted by Member States under the 2020 DCF Economic data call and the most recent scientific assessments on stock status and their exploitation rates, values for the technical, economic and biological indicators were computed for the years 2009-2018 and analysed as specified in the European Commission Guidelines, by the STECF EWG-20-11 virtual meeting, held from the 21–25 September 2020. In addition, values for several additional indicators were computed and observations were made regarding their robustness and sensitivity in relation to data availability and suitability for assessing the balance between capacity and fishing opportunities. Where relevant, indicator values using data from the 2020 Fisheries Dependent Information (FDI) data call were also computed and compared with equivalent values derived from data submitted in response to the Annual Economic data call. For each Member State, country chapters are provided and include: (1) an overview of whether, according to the Commission Guidelines, fleet segments can be considered in or out of balance with their fishing opportunities; (2) an assessment on whether the Member State fleet report provides a sound and comprehensive analysis of balance between fleet capacity and fishing opportunity; (3) a comparison of the indicator values, trends and assessment of balance by fleet segment found in the fleet reports with those calculated by the EWG, highlighting any discrepancies and, where possible, identifying the reasons for such discrepancies and (4) an assessment on whether the measures in the new or revised action plans are appropriately targeted, timebound and likely to contribute to redressing the imbalance in the fleet segments concerned. The EWG was also requested to list the fleet segments in the EU Outermost Regions that were indicated to be out of balance with their fishing opportunities, together with the fish stocks and fishing areas on which they rely as well as a list of fleet segments for which information available does not allow to calculate the indicators and conclude on balance.

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-20-11)

Request to the STECF

The STECF is requested to assess the extent to which the STECF Expert Working Group 20-11 delivered on its Terms of Reference and provide, where relevant, recommendations for future work.

Based upon the findings presented by the STECF Expert Working Group 20-11 the STECF is requested to:

- Summarize and assess both the status and trends (past 5-6 years) of the balance situation of EU fleet segments in line with the Commission guidelines COM(2014)545.
- Advise for each Member State whether the annual national fleet report and, where relevant, action plan submitted by 31 May 2020 present an appropriate and complete analysis of balance between fleet capacity and fishing opportunity of all EU fleet segments, based on DCF information and in line with the Commission guidelines COM(2014)545. In the absence of an appropriate or complete analysis or where discrepancies between the national calculations and those carried out by STECF Expert Working group 20-11 are found, STECF is requested to identify the reasons and recommend how to remedy this situation for the upcoming reporting year.
- Advise, for each concerned Member State, whether the proposed measures in new or revised action plans submitted with the most recent fleet reports are likely to redress the imbalance in the fleet segments concerned. If this is not the case, STECF is requested to recommend how the action plan presented by the Member State can be improved.
- Propose improvements for Member State's annual reports and actions plans in line with the Commission guidelines, with a view to enhancing coherence between the reports and with STECF calculations and methodology in particular.
- Assess the balance situation in each of the outermost regions, including as regards data availability, and provide recommendations in this regard for the Member States concerned.

Based on the review and calculations carried out by STECF Expert Working Group 20-11, the STECF is requested to:

- Advise on the utility of the following indicators taking into account their relevance in assessing the balance between capacity and fishing opportunities, their robustness and ease of calculation and recommend a suite of informative indicators for the assessment of balance/capacity at the fleet segment level.
  a) Number of overfished stocks (NOS)
  b) Economic dependency indicator (EDI)
  c) Number of stocks at risk (NSR)
  d) Restricted Sustainable harvest indicator (SHIR)
- Compare and evaluate the suitability and utility of data submitted in response to the FDI and AER data calls in computing the SHI and/or SHIR indicator values. If

possible, recommend which of the data sets would be most appropriate to use as a basis for computing such indicators in future.

STECF comments

STECF reviewed the report of the EWG 20-11 and notes that all tasks were addressed to the extent possible.

Q1: Summarize and assess both the status and trends (past 5-6 years) of the balance situation of EU fleet segments in line with the Commission guidelines COM(2014)545.

STECF notes that the EWG report indicates for the EU fishing fleet overall, and according to the criteria in the Commission guidelines, 79% of the 201 fleet segments for which the SHI could be calculated were indicated to be out of balance. These 201 fleet segments represent the 30% of the active fleet segments in 2018. Furthermore, the economic indicators suggested an unbalanced situation for between 75% and 66% (depending on the indicator selected) of the segments for which these indicators could be calculated. Finally, technical indicators suggest that according to the Commission guidelines. between 65% and 55% of the segments (depending on the indicator) are out of balance.

To assess trends in indicator values, a regional approach is appropriate and accordingly STECF notes the following from the EWG report:

According to the Commission guidelines, for the North Atlantic Ocean, 69% of the 125 fleet segments for which the SHI could be calculated were out of balance. However, 38% of them present an improving trend and 11% are worsening. For the remaining segments, no trend could be calculated or obtained. Considering the economic indicators (CR/BER, RoI, and RoFTA) they suggest that most of the segments are in balance and present a positive trend. Finally, for technical indicators of most of the segments no clear trends could be calculated or obtained.

For the Mediterranean and Black Seas, all but one of the 65 fleet segments for which the SHI could be calculated were out of balance. 20% of them present an improving trend and 25% are worsening. For the remaining segments, no trends could be calculated or obtained. Considering the economic indicators (CR/BER, RoI and RoFTA), they suggest that most of the segments are in balance and present a positive trend. Finally, for technical indicators, they appear to be out of balance. However, STECF notes that given that this sea basin is composed mainly by small scale fleets, the technical indicators are unlikely to provide any reliable information to assess the balance in this sea basin.

For other fishing regions. 17% of the 11 fleet segments for which the SHI could be calculated were out of balance. However, STECF notes that the number of fleet segments for which calculations are made is small. Furthermore, STECF notes that no trends assessment could be made for any of biological, economic and technical indicators in this sea basin.

Q2: Advise for each Member State whether the annual national fleet report and, where relevant, action plan submitted by 31 May 2020 present an appropriate and complete analysis of balance between fleet capacity and fishing opportunity of all EU fleet segments, based on DCF information and in line with the Commission guidelines COM(2014)545. In the absence of an appropriate or complete analysis or where discrepancies between the national calculations and those carried out by STECF

Expert Working group 20-11 are found, STECF is requested to identify the reasons and recommend how to remedy this situation for the upcoming reporting year.

The EWG evaluated the annual national fleets reports. The STECF agrees with the EWG that national fleets reports were in general in line with the Commission guidelines. Only two national reports (France and Italy) could not be compared with the EWG calculations, due to the use of different fleet segmentations.

STECF also notes that the national reports and the indicators calculated by the EWG differed in some cases with not a specific reason of why these differences exist. However, STECF notes that the differences identified in general, did not affect the status of the fleet segments concerned (in or out of balance).

STECF notes that the objective of national reports is to highlight those segments that are out of balance, and that Member States use them to take management actions at their national fleet level. Therefore, STECF acknowledges that following the AER fleet segmentation may be of limited usefulness at national level if the fleets are traditionally managed following another segmentation. However, it would then be important to relate the national segments with those required by the Commission guidelines. STECF notes that the metier level is not the adequate segmentation level, given that capacity cannot be managed at this level.

Q3 &Q4: Advise, for each concerned Member State, whether the proposed measures in new or revised action plans submitted with the most recent fleet reports are likely to redress the imbalance in the fleet segments concerned. If this is not the case, STECF is requested to recommend how the action plan presented by the Member State can be improved.

The action plans submitted by Member States were generally not sufficiently detailed regarding the precise measures to be implemented or their objectives and targets for reducing the perceived imbalance in the fleet segments concerned. STECF considers that Member States' 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 of the action plan, i.e. that relate to those fleet segments that are identified as being imbalanced and/or the fish stocks on which those segments are reliant;

iii. targets that are:

(a) quantifiable,

(b) specific to those fleet segments or fish stocks identified,

(c) justified, e.g. by estimating the impact of the target proposed; and

iv. measures that are considered effective and are appropriate for the imbalanced fleet segments, e.g. by illustrating how the proposed measures will achieve the stated objectives and targets;

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

STECF also considers that the Member States should supply the necessary data and analyses that demonstrate the likely effectiveness of the proposed measures in achieving the objectives and targets.

Q5: Assess the balance situation in each of the outermost regions, including as regards data availability, and provide recommendations in this regard for the Member States concerned.

STECF notes that the indicators from the outermost regions are in general scarce and the available time series is too short to provide any trend on the evolution of these indicators. For Portuguese and Spanish outermost regions, economic data are available for recent years, although trends cannot be obtained. For French outermost regions there is lack of such data. In general, biological indicators could not be computed due to the general absence of stock assessment and/or catch data and by fleet segment. Technical indicators suffer from the same problem as other small-scale segments, i.e., when the VUR indicator is absent, the use of VUR220 is inadequate for these types of fisheries.

Therefore, currently it is not possible to have a full assessment of the in or out of balance situation of the outermost regions' fleet segments and neither the trend of this for the majority of them. STECF notes that elements can be improved in order to have a wider overview of the outermost regions. These include:

- From the biological indicators STECF notes the requirements of increase knowledge of information on fishing mortality and reference points for many stocks.
- The need of a proxy value for Blim when not available. STECF agrees with the EWG that value equivalent to 50% x BMSY could be a good candidate as a proxy for Blim
- STECF notes that for economic data the economic data call will require a geographical indicator, to allocate these segments adequately to the OMRs.
- STECF notes the need for Member States to report the variable maximum days at sea, to obtain a reliable indicator for VUR and avoiding using VUR220.

Q6: Advise on the utility of the following indicators taking into account their relevance in assessing the balance between capacity and fishing opportunities, their robustness and ease of calculation and recommend a suite of informative indicators for the assessment of balance/capacity at the fleet segment level

As requested by the EWG ToRs and based on a proposal from the STECF (STECF PLEN 19-03) the EWG report discusses the pros and cons of each indicator and reports on limited sensitivity analyses. Based on the EWG results, STECF notes that:

- The Number of Overfished Stocks indicator (NOS) is not robust to segments catching many different species and it requires the definition of a natural threshold, therefore more work is required for the interpretation of this indicator.
- The Economic Dependency Indicator (EDI) has the advantages of i) being robust in time if the segment aggregation remains constant and ii) that it can be computed readily with the data available each year. It complements the information provided by the Sustainable Harvest Indicator (SHI) and the Stocks AT Risk indicator (SAR). The added value of the EDI is that it highlights those fleet segments which are relying most heavily on overfished stocks and that therefore, it provides an indication of where action might be needed.
- The Number of Stocks at Risk indicator (NSR) requires a Blim estimation, which implies that the number of segments for which this indicator can be computed is limited. Therefore, while it can complement the SAR indicator, it cannot replace it unless a proxy for this Blim is found such as the use of 50% x BMSY.
- The restricted Sustainable Harvest indicator (SHIr) has the advantage of no compensation between positive and negative values compared to SHI and

therefore it helps on the interpretation. However, it shares the same pros and cons as the SHI without adding new information.

STECF agrees with the EWG that the current suit of indicators can give Member States an indication that there may be an imbalance between fleet capacity and fishing opportunities at the individual fleet segments level.

STECF notes the assessment of robustness and sensitivity analysis provided by the EWG, reveals that NOS and EDI are stable (when always using the same data sources) and that the sensitivity analysis showed minor issues.

STECF observes that EDI as new indicator can provide additional information for those Member States that have a substantial number of fleet segments with indications of imbalance. For example, the EDI indicator may help Member States to prioritize actions according to how dependent different fleet segments are financially on overfished stocks.

STECF notes that the proposed new indicator SHIr indicator has limited use in assessing balance. The reason is that SHIr provides an indicator value above 1.0 for all fleet segments that exploit stocks that are being exploited at a rate above FMSY irrespective of the number of such stocks that are exploited by each fleet segment.

STECF notes that the proposed new indicator NSR is of limited value as it can only be computed for fleet segments that exploit stocks assessed to be below $B_{lim,}$ but Blim and is currently computed for only a limited number of stocks, mainly in the northeast Atlantic area. It would be more informative to modify the criteria currently specified in the Commission guidelines to identify stocks at risk and compute two categories of the SAR indicator; i) a SAR based on using criterion (a) only and ii) a SAR based on criteria b, c and d[1].

STECF notes that additional economic indicators were proposed by the EWG although they were not explicitly included in their TORs. The EWG recalled previous comments of the STECF regarding replacing two indicators by two others. CER/BER and RoFTA in most cases do not differ and they only reflect capital productivity and not labour or resource productivity.

Q7: Compare and evaluate the suitability and utility of data submitted in response to the FDI and AER data calls in computing the SHI and/or SHIR indicator values. If possible, recommend which of the data sets would be most appropriate to use as a basis for computing such indicators in future

STECF notes that indicators can be calculated using both AER and FDI data calls, but that both provide different values, derived from different segmentations and clustering, (MS need to cluster the segments due to confidentiality reasons). However, as the database is confidential MS should deliver the same data to both databases and highlight those data were there could be confidentiality issues.

STECF notes that the added value of using FDI data comes from the inclusion of discards in the catch data and the finer geographical reference which can help on

[1] a) assessed as being below the B_{lim};
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;
c) subject to a fishing opportunities regulation which stipulates that the fish should be returned to the sea unharmed or that landings are prohibited;
d) a stock which is on the IUCN 'red list' or is listed by CITES.

linking species' landings with stocks and therefore, help on the biological indicators' calculation.

STECF conclusions

STECF concludes that all terms of reference were successfully addressed by the EWG to the extent possible.

STECF concludes that the majority of the biological and technical indicators for the North Atlantic Ocean and the Mediterranean and Black seas basin suggest that according to the Commission guidelines the majority of the fleet segments are out of balance. Conversely, the economic indicators, suggest that the majority of fleet segments are in balance. For the case of technical indicators, STECF also concludes that the use of VUR220 indicator is misleading for small scale segment and/or seasonal fisheries.

STECF concludes that for the balance indicators for the majority of fleet segments in the OMR indicators cannot be assessed due to lack of data. Furthermore, no trends assessments can be made for these regions. STECF encourages taking the necessary steps for increasing the collection of information for these areas, to compute the indicators at the biological, economic and technical dimensions.

STECF concludes that the national plans require an objective assessment criterium beyond the interpretation of the individual experts of the EWG.

STECF concludes that in order to provide an informed opinion on whether the measures in the action plans from Member States are likely to be effective at attaining targets and achieving objectives, the information explained above should be included in the national plans.

STECF concludes that the current biological indicators should be kept but it would be beneficial that all Member States calculate the indicators using the same method and input data.

STECF concludes that the addition of two new biological indicators (NOS and EDI) complementing SHI, would provide additional information for managers to prioritize actions on groups of fleet segments not in balance according only on SHI or SAR. As a general point, once a manager had selected the fleet segments out of balance according to SHI, can rank them according to EDI or NOS values to decide which of the fleet segments would need more timely actions. Finally, by checking the SAR score and the relating stocks it could allow the degree of impact of the fleet segment on a selection of stocks or species considered threatened to be assessed. A similar approach using only SHI values could be misleading because the averaged values of F/FMSY, although weighted by landing values, can hide situation where fleet segments are strictly dependent on a group of stocks that are clearly subject to overfishing.

STECF concludes that regarding the use of the alternative indicators NOS and EDI, there are two options:

1) Include the two proposed indicators in the guidelines in case DG Mare decides to issue new guidelines for 2022. Then Member States would be required to calculate the indicators. STECF underlines that these new indicators are potentially helpful for Member States to manage their fleets and not simply to provide more indicator values to judge if fleets are in or out of balance.

2) STECF calculates those indicators (as already done to a certain extent by the annual EWG) and Member States are able to apply those indicators internally to manage their fleets. It would still give DG Mare more insight into the fleet segments which need to be addressed to reduce the number of fleet segments out of balance.

STECF concludes that the problems encountered in the EWG assessment of both indicators and the little added information they provide, SHIr and NSR should not be included in the next Guidelines. However, a possible future revision of the Commission guidelines would benefit from the addition of two new economic indicators, while making two others optional. The new indicators should be:

N(et)P(rofit)/C(urrent)R(evenues) and

N(et(V(alue)A(added)/F(ull)T(ime)E(quivalent),

while CER/BER and GVA/FTE could be removed or made them optional.

STECF concludes that the use of FDI data is preferable to calculate the biological indicators (includes discards data) although they have to be calculated at the AER segment level based on Table A of FDI with "fill-ins", to link them to the economic indicators and because it is the fleet segment level at which Member States can manage capacity.

STECF concludes however, that using FDI data instead of AER has implications in terms of timing and planning, which should be taken into account in the STECF 2021 workplan.

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1 INTRODUCTION

1.1 Terms of Reference for EWG-20-11

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, based on DCF information and in line with the Commission Guidelines (COM (2014) 545). Where possible, evaluation should use data reference years 2010 to 2019.

Terms of Reference:

An Expert group of the STECF (Chair, Dr John Casey), EWG 20-11, will be convened from 21 to 25 September 2020 to undertake the following tasks and report to the STECF.

1. Based on the data submitted by Member States[2] under the 2020 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 technical, economic and biological indicators specified in the European Commission Guidelines[3].

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

Values for the following indicators to be provided as specified in the 2014 Commission guidelines[4]:

(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)

[2] References to Member States in these ToR include the UK

[3] 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.

[4] Id.

(v) The inactive fleet indicators

(vi) The vessel use indicator

For fleet segments for which the indicator values can be calculated, the Expert group is requested to present the trend over the last 5/6-year period.

2. In line with the findings and recommendations of STECF EWG 19-13 and PLEN 19-03 regarding 'balance indicators', compute values for the additional indicators listed below.

a) Number of overfished stocks (NOS)
b) Economic dependency indicator (EDI)
c) Number of stocks at risk (NSR)
d) Restricted Sustainable harvest indicator (SHI_R)

The Expert group is requested to comment on their robustness and sensitivity in relation to data availability in Area 27, Area 37, long distance fleets and outermost regions and their suitability for assessing the balance between capacity and fishing opportunities.

3. For those indicators that utilise both economic data and stock assessment metrics (SHI, SHI_R), if possible, compute indicator values using data submitted in response to the Fisheries Dependent Information (FDI) data call. Compare such values with equivalent indicator values derived from data submitted in response to the Annual Economic data call. Comparison should be made for at least one complete year of data by fleet segment and for Area 27, Area 37, long distance fleets and outermost regions. Discuss the utility and suitability of the different data sets to compute the indicator values.

4. The Expert group is requested to provide country chapters containing the following information for each Member State, in order to allow the STECF to issue an informed advice:
    a. Based on the biological, economic or technical indicator values and their recent trends as computed under task 1, provide an overview of whether, according to the Commission Guidelines (COM (2014) 545) fleet segments can be considered in or out of balance with their fishing opportunities.
    b. Assess whether the fleet reports submitted by 31 May 2020 by the Member States under Article 22.2 and 22.3 of Regulation (EU) 1380/2013 provide a sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all EU fleet segments, based on DCF information and in line with the Commission guidelines COM(2014)545.
    c. For each fleet segment, compare the biological, economic or technical indicator values as computed under task 1 with the equivalent values and trends in the fleet reports submitted by the Member State under Article 22.2 and 22.3 of Regulation (EU) 1380/2013. Highlight any discrepancies between the Member State's assessment of balance between capacity and fishing opportunities and the Expert group's

assessment based on the indicator values computed under task 1. Where possible, identify the reasons for such discrepancies.

d. Comment on whether the measures in the new or revised action plans submitted with the fleet reports by 31 May 2020 are appropriately targeted, timebound and are likely to contribute to redressing the imbalance in the fleet segments concerned.

5. For the Outermost Regions of France (Réunion, French Guiana, Martinique, Guadeloupe, Saint-Martin and Mayotte), Portugal (Madeira and Azores) and Spain (Canary Islands), list those fleet segments that according to the most updated set of data (2018 or later if available) for either the biological, economic or technical indicators in the Commission Guidelines, 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. 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 at least 75% of the total value of the landings by that fleet segment. List the fleet segments for which information available does not allow to calculate the above indicators and conclude on balance.

6. For each Member State, the Expert group is requested to list in the Annex to its report those fleet segments that according to the most updated set of data (2017 or later if available) 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. 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 at least 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 and for other fishing regions (OFR).

2 GENERAL CONSIDERATIONS REGARDING THE ASSESSMENT OF 'BALANCE'

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 Commission guidelines (COM (2014) 545 FINAL) for assessing the balance between capacity and fishing opportunities[5]. Furthermore, numerous suggestions for modification and improvement have also been provided in previous reports.

All such critisisms and suggestions have been endorsed by the STECF and remain valid.

In this report, the terms "in balance" and "out of balance" and analogous terms, are used strictly in relation to the criteria given in the Commission guidelines (COM (2014) 545 Final). Such terms are used to describe a favourable (in balance) or unfavourable (out of balance) situation based on the value computed for specific indicators in relation to the threshold specified for such indicators.

[5] 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.; STECF report 17-08; 3.4 and ANNEX I; STECF report 18-14; 3.4 and ANNEX I; STECF report 19-13; 3.4 and ANNEX I.

3 TASK 1 - ASSESSMENT OF BALANCE INDICATORS

3.1 Background

All indicators provided and used in the STECF EWG 20-11 were calculated according to the 2014 Commission guidelines (COM (2014) 545 final[6]. The Commission's 2014 Commission 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*

Economic and technical indicators for the period 2008-2018 (2019 in some cases) were prepared by the STECF EWG 20-03 (2020 Annual Economic Report on the EU Fishing Fleet I). The SAR and SHI indicator values were prepared under ad hoc contracts.

All indicators values were reviewed and finalised at a preparatory expert group held at the JRC in Ispra, Italy, from 15 to 17 July 2020. The values used for this report were those finalised and agreed following the preparatory expert group on 25 July 2020. Indicators, data sources and other relevant information regrding their computation are listed in Table 3.2.1.1.

A table containing all the balance indicators by Member State (MS) and fleet segment (supra-region[7] + fishing technology + vessel length) was compiled by the JRC and provided to EWG 20-11. Indicator values were computed for each year over the period 2008-2018 (or 2019 for some indicators).

Specific details on computing indicator values are given in Annex I to this report.

[6] 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.

[7] 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 3.2.1.1 - Indicators provided to experts at EWG 20-11.

Indicator		Calculated by	Comments
Biological indicators	**SHI** Sustainable Harvest Indicator	Jerome Guitton	1. Calculated by landings value for 2008-2019 for every EU fleet segment for which data were available (2019 data are provisional and may be subject to change): • 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. Updated information on stock assessments carried out at FAO/GFCM working groups was collected during preparatory meeting. b. Tuna fisheries stock assessment c. CECAF Working group d. South Pacific Regional Fishery Management Organisation 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. EDI, NOS, NSR and SHIr have been provided in order to discuss their utility regarding future guidelines for bioindicators. (TOR 3) 4. A brief comparison between FDI and annual economic data was carried out regarding the TOR 3. 5. ToR 4: the output was described in the term of reference. For each Member State, those fleet segments that according to the 2018 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 (=NAO), FAO area 37 (=MBS) or other fishing region (OFR). This new indicator was developed for all the fleets. However, data were also provided using subsegmentation for OFR in order to

			identify some specific fleets operating in OFR (Martinique, Guadeloupe, Mayotte, Réunion, , , etc.). This new indicator was developed for all the fleets, including fleets in sub segmentation in OFR.
	SAR Stocks at Risk Indicator	Armelle Jung Jerome Guitton	1. Calculated for 2009-2019 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 accessed through the ICES website (up to the cut-off date 06/07/2019). • For fleet segments operating in Area 37, the most recent GFCM/SAC and STECF stock assessment reports were taken into account. • For fleet segments operating in other areas (OFR), STECF stock assessment reports and RFMO's reports were considered. • Additional information was taken from Council Regulations fixing annual fishing opportunities; from GFCM, ICCAT, CECAF, IOTOC, SEAFO, NAFO or SPRFMO scientific assessments reports, advices or recommendations; • Extraction from CR (Critically Endangered) IUCN list for marine fishes (*Actinopterygii* and *Elasmobranchii)* was updated for 2020 as well as CITES (Washington Convention). 3. SAR indicator values were provided using a SQL script developed by Jerome Guitton.
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 20-03; 2. The target reference value to which the indicator value is compared is the 2018 risk-free interest rate. The most recent 5-year average (2014-2018) was also used, as stipulated in the 2014 Commission guidelines. 3. Calculated for years 2008-2018, the most recent year for which DCF economic data are available. 4. Values are in real terms, i.e., nominal values adjusted

			for inflation (base=2015)
	CR / BER Current revenue as proportion of break-even revenue	JRC	1. Calculated for years 2008-2018, the most recent year for which DCF economic data are available. 2. The long-term viability analysis of CR/BER approach was taken. 3. Values are in real terms, i.e., nominal values adjusted for inflation (base=2015)
Technical/inactivity indicators	**VUR** Fleet segment utilisation indicator Average Days at Sea / Maximum Days at Sea	JRC	1. Calculated for years 2008-2018. 2. Calculated when MS provided either maximum observed days at sea (DAS) for each fleet segment or maximum theoretical DAS. 3. The EWG also used the value of 220 maximum theoretical days at sea (VUR_{220}) per fleet segment, as stipulated in the 2014 Commission guidelines, to accommodate cases where the relevant information was not provided by MS.
	Inactive vessels per length category	JRC	1. Number and proportion of inactive vessels, in number, GT and kW for years 2008-2018.
Data sources: 2020 DCF Fleet Economic Data Call; ICES online stock assessment database; JRC STECF stock assessment database; GFCM 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 (EU-MAP) (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 2020 call for fleet economic scientific data concerning 2008-2018/19 issued by DG MARE on 28 January 2020. The two biological indicators (SHI and SAR indicator) were calculated based on transversal (landings) data submitted under the same data call. Additional information needed to calculate the biological indicators was obtained from other sources (see Table 3.2.1.1).

The 2020 fleet economic data call requested transversal and economic data covering years from 2008 to 2018/19. Capacity data (GT, kW, no. of vessels) was requested up to and including 2019, while employment and economic parameters were requested up to and including 2018. Most effort and all landings data were requested up to and including 2019, albeit on a voluntary basis, to allow for economic

performance projections to be estimated for 2019. Landings and effort data for fleet segments operating in the Mediterranean & Black Sea region (i.e. Area 37 or MBS) were requested at the GCFM-GSA level. 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).

In terms of the completeness of the Member States data submissions, most countries submitted most of the parameters requested under the fleet economic data call. In overall, there has been an improvement in the data quality and coverage compared to previous years. In many cases missing data relates to fleet segments with low vessel numbers for which data is hard to obtain or for confidentiality reasons.

For confidentiality reasons, Member States may aggregate fleet segments into clusters to provide sensitive economic data. However, in several cases, clustering may not be enough to guarantee confidentiality, and hence, parts of MS fleets are not completely covered. These generally relate to distant-water fleet segments and include MS such as Estonia, Germany and Poland. Other MS, such as Latvia, simply did not provide any data on part of their fleet (high sea fleet).

Specific data issues at MS level, which can affect the quality and coverage of the balance indicators will be summarised in the 2020 AER.

Numbers of active fishing vessels by member state and region are given in Table 3.2.2.1.

Table 3.2.2.1 Number of inactive vessels by length group and supra-region for each Member State in 2018 and 2019

MS	NAO												NAO Total		MBS												MBS Total		OFR												OFR Total		EU Total	
	VL0010		VL1012		VL1218		VL1824		VL2440		VL40XX				VL0006		VL0612		VL1218		VL1824		VL2440		VL40XX				VL0010		VL1012		VL1218		VL1824		VL2440		VL40XX					
	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
BEL					1	1	2	1	1	1			4	3													-	-													-	-	4	3
BGR													-	-	249	268	399	444	9	9	2	1					659	722													-	-	659	722
CYP													-	-	1	41	32	38	3	4			1	1			37	84													-	-	37	84
DEU	349	325	16	18	10	9	4	3	1	2		1	380	358													-	-													-	-	380	358
DNK																																											
ESP	630	574	35	26	41	40	8	10	15	13	2		731	663	78	60	252	205	54	41	16	10	6	6			406	322					1	3	2	2	13	14	4	3	20	22	1,157	1,007
EST	463	578	20	26	4	1			1				488	605													-	-													-	-	488	605
FIN	1,795	1,818	110	101	9	5	1	1		2			1,915	1,927													-	-													-	-	1,915	1,927
FRA	166	166	30	30	9	9	8	8	2	2			215	215	56	56	135	135	4	4	3	3	3	3	1	1	202	202	597	597	33	33			12	12					642	642	1,059	1,059
GBR	1,387	1,381	60	63	37	32	15	13	26	18			1,525	1,507													-	-													-	-	1,525	1,507
GRC													-	-	523		861		17		16		6				1,423	-													-	-	1,423	-
HRV													-	-	690	687	790	750	104	108	40	34	44	39			1,668	1,618													-	-	1,668	1,618
IRL	548	547	95	85	18	14	7		6	3			674	649													-	-													-	-	674	649
ITA													-	-	295	248	618	592	41	52	33	16	18	12	1		1,005	920									1	1			1	1	1,006	921
LTU	36	35	5	6	1	1	1	2	9	10			52	54													-	-											4	3	4	3	56	57
LVA	77	77											77	77													-	-													-	-	77	77
MLT													-	-	107	128	86	92	4	2	9	6	4	2			210	230													-	-	210	230
NLD	137	139	12	14	16	15	13	17	17	17	4	4	199	206													-	-													-	-	199	206
POL	25		18		4		2						49	-													-	-													-	-	49	-
PRT	3,936	3,987	75	79	119	122	35	37	24	27	3	4	4,192	4,256													-	-													-	-	4,192	4,256
ROU													-	-	6	3	24	20	1	1							31	24													-	-	31	24
SVN													-	-	27	31	24	29	6	4	1	1					58	65													-	-	58	65
SWE	243	229	33	35	8	10	1	3	3	2			288	279													-	-													-	-	288	279
Total	**9,792**	**9,856**	**509**	**483**	**277**	**259**	**97**	**95**	**105**	**97**	**9**	**9**	**10,789**	**10,799**	**2,032**	**1,522**	**3,221**	**2,305**	**243**	**225**	**120**	**71**	**82**	**63**	**2**	**1**	**5,699**	**4,187**	**597**	**597**	**33**	**33**	**1**	**3**	**14**	**14**	**14**	**15**	**8**	**6**	667	668	17,155	15,654

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 MS on a voluntary basis. When these data are not provided, the indicator cannot be calculated. On the other hand, the calculation of the SHI > 40% indicator depends on the availability of stock assessment information. When this 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 3.2.3.1 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 3.2.3.1 Coverage of each balance indicator in terms of landed value submitted by MS for the reference year 2018. 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.

MS	Sustainable Harvest Indicator (SHI)	SHI >=40%	Return on Investment (RoI)*	Return on fixed tangable assets (RoFTA)	Current revenue / break-even revenue (CR/BER)	Vessel utilisation ratio (VUR)	Vessel utilisation ratio 220 days (VUR220)
BEL	100%	85%	0%	100%	100%	100%	100%
BGR	100%	77%	0%	100%	100%	100%	100%
CYP	88%	0%	0%	93%	93%	0%	100%
DEU	100%	49%	0%	68%	68%	68%	68%
DNK	99%	91%	100%	100%	100%	0%	100%
ESP	99%	32%	77%	99%	99%	100%	100%
EST	100%	63%	100%	100%	100%	0%	100%
FIN	100%	75%	100%	100%	100%	100%	100%
FRA	95%	57%	0%	77%	77%	90%	100%

GBR	97%	70%	100%	100%	100%	0%	100%
GRC	97%	25%	0%	100%	100%	100%	100%
HRV	100%	82%	48%	100%	100%	100%	100%
IRL	92%	75%	0%	88%	88%	17%	97%
ITA	100%	61%	17%	99%	99%	100%	100%
LTU	100%	97%	100%	100%	100%	100%	100%
LVA	100%	88%	0%	100%	100%	100%	100%
MLT	100%	13%	83%	100%	100%	100%	100%
NLD	100%	68%	100%	100%	100%	100%	100%
POL	100%	54%	0%	100%	100%	100%	100%
PRT	99%	32%	0%	100%	100%	100%	100%
ROU	100%	100%	100%	100%	100%	100%	100%
SVN	100%	0%	0%	100%	100%	100%	100%
SWE	100%	93%	0%	100%	100%	100%	100%
Total	**98%**	**55%**	**46%**	**94%**	**94%**	**75%**	**99%**

* when at least one of the following variables was provided: income from fishing rights, fishing rights costs and value of fishing rights.

It is important to note that full coverage in the table above does not necessarily mean that the entire MS fleet was covered. 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 2020 data call, Latvia, which appear to have full coverage for most of the indicators, provided data only on the Baltic Sea fleet, since no data on the 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 2020 with missing landings in value that can be identified is presented in Table 3.2.3.2.

Table 3.2.3.2 Summary table showing for each Member State the number of fleet segments for which data on landings in value were available in 2018, the number of active fleet segments, and the active fleet segments in 2018 with missing landing values.

MS	Supra region	No. of fleet segments	No. of inactive fleet segments	No. of active fleet segments	No. of fleet segments with data on weight of landings	No. of fleet segments with data on value of landings	Economic data availability	Data provision format for landings in 2018	Data provision format for economic data in 2018	Landings data coverage in 2018	Economic data (needed to calculate indicators) coverage in 2018	Fleet segments with missing landings value or essential economic variables in 2018
BEL	NAO	13	3	10	4	4	4	Fleet segments and aggregate fleet segments		Available for all fleet segments or aggregate fleet segments		
BGR	MBS	28	4	24	24	24	15	Fleet segment	Aggregate fleet segment	Available for all fleet segments or aggregate fleet segments		
CYP	MBS	11	4	7	7	7	6	Fleet segment	Fleet segment	Available for all fleet segments	Missing for 1 fleet segment (confidentiality)	PS 2440 NGI
DEU	NAO	27	5	22	14	14	13	Fleet segments and aggregate fleet segments		Available for all fleet segments or aggregate fleet segments	Missing for 1 clustered fleet segment (confidentiality)	Pelagic fleet - TM 40XX NGI* (TM 1218, TM 1824, TM 2440 and TM 40XX)
DNK	NAO	19	0	19	19	19	18	Fleet segment		Available for all fleet segments	totdepcost missing for DTS 0010	DTS0010 NGI
ESP	MBS	34	4	30	29	29	18	Fleet segment	Fleet segments and aggregate fleet segments	Available for all fleet segments or aggregate fleet segments	Missing for 1 clustered fleet segment and 2 fleet segments	DRB 0612 NGI*, DTS 0612 NGI, PMP 0006 NGI (totdepcost)
	NAO	59	6	53	49	49	31	Fleet segments and aggregate fleet segments			Missing for 1 clustered fleet segment and 1 fleet segment	FPO1012 IC *, ESP NAO HOK2440 NGI (totdepcost)
	OFR	13	1	12	9	9	6	Aggregate fleet segments				
EST	NAO	10	4	6	5	5	3	Fleet segment	Fleet segments and aggregate fleet segments	Missing for 1 fleet segment (confidentiality)		NAO DTS40XX IWE
FIN	NAO	12	4	8	5	5	5	Aggregate fleet segment		Available for all fleet segments or aggregate fleet segments		
FRA	MBS	34	6	28	28	28	17	Fleet segment	Fleet segments and aggregate fleet segments	Available for all fleet segments or aggregate fleet segments		
	NAO	57	5	52	51	51	31			Available for all fleet segments or aggregate fleet segments	Missing for 2 segments	DTS40XX NGI, TM 40XX NGI (totdepcost)
	OFR	52	13	39	33	33	10			Mising for 6 fleet segments	Missing for 12 fleet segments or clustered segments	Missing for all OMR MF fleets and IWE fleet; OFR DFN1012 GF *, PGP0010 MF * (landings and economic data); DFN0010 YT *, HOK0010 YT, PGP0010 RE *, HOK0010 RE *, DTS1824 GF, DFN0010 MQ, HOK0010 MQ, PGO0010 MQ, PGP0010 MQ *, FPO0010 MQ, PS 40XX IWE (totdepcost, totdeprep)

MS	Supra region	No. of fleet segments	No. of inactive fleet segments	No. of active fleet segments	No. of fleet segments with data on weight of landings	No. of fleet segments with data on value of landings	Economic data availability	Data provision format for landings in 2018	Data provision format for economic data in 2018	Landings data coverage in 2018	Economic data (needed to calculate indicators) coverage in 2018	Fleet segments with missing landings value or essential economic variables in 2018
GBR	NAO	47	5	42	42	42	29	Fleet segment	Fleet segments and aggregate fleet segments	Available for all fleet segments	Available for all fleet segments or aggregate fleet segments	
	OFR	3	0	3	3	3	0			Available for all fleet segments or aggregate fleet segments	Clustered with a NAO segment	
GRC	MBS	28	5	23	15	15	16	Aggregate fleet segment		Mising for 1 aggregate fleet segment	Available for all fleet segments or aggregate fleet segments	MBS DRB0612 NGI*
HRV	MBS	33	5	28	28	28	23	Fleet segment	Fleet segments and aggregate fleet segments	Available for all fleet segments or aggregate fleet segments		
IRL	NAO	35	5	30	30	30	12	Fleet segment	Fleet segments and aggregate fleet segments	Available for all fleet segments	Missing for all 6 small scale segmenst (VL0010), 11 fleet segments	All*VL0010, HOK1012 *, TM 1012 * (totdeprep and totdepcost) and TBB2440 * (totdeprep)
ITA	MBS	29	6	23	22	22	21	Fleet segments and (1) aggregate fleet segment		Available for all fleet segments or aggregate fleet segments		
	OFR	3	1	2	2	2	1	Fleet segment	Aggregate fleet segments			
LTU	NAO	13	5	8	8	8	4	Fleet segment	Fleet segments and aggregate fleet segments	Available for all fleet segments or aggregate fleet segments		
	OFR	3	1	2	2	2	1					
LVA	NAO	4	1	3	3	3	3	Aggregate fleet segment		Available for all Baltic Sea fleet segments or aggregate fleet segments		
MLT	MBS	24	5	19	10	10	10	Aggregate fleet segment		Available for all fleet segments or aggregate fleet segments		
NLD	NAO	31	6	25	11	11	11	Aggregate fleet segment		Available for all fleet segments or aggregate fleet segments		
POL	NAO	21	4	17	10	7	7	Aggregate fleet segment		Value of landings not provided	Missing for 3 segments	DTS40XX, FPO 2440, TM 40XX NGI
	OFR	1	0	1	1	0	0	Fleet segment			Missing for 1 segment	OFR TM 40XX
PRT	MBS	1	0	1	1	1	1	Fleet segment	Fleet segment	Available for all fleet segments or aggregate fleet segments		
	NAO	72	16	56	50	50	50	Aggregate fleet segment				
	OFR	3	0	3	2	2	2					
ROU	MBS	9	3	6	6	6	4	Fleet segment	Aggregate fleet segment	Available for all fleet segments or aggregate fleet segments		
SVN	MBS	14	4	10	3	3	3	Aggregate fleet segment		Available for all fleet segments or aggregate fleet segments		
SWE	NAO	29	3	26	24	24	7	Aggregate fleet segment		Available for all fleet segments or aggregate fleet segments		

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_2020/

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 time-series 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 Commission guidelines, and (ii) the alternative indicators suggested in STECF reports 15-02 and 15-15.

The expert group 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.

3.3 Task 2 – Additional Indicators

Introduction

The STECF and previous Expert Working Groups have commented extensively on the problems of assessing the balance between fleet capacity and fishing opportunities and especially the issues and limitations associated with the indicators currently in use. Essentially the terms "out of balance" or "imbalance" and similar terms imply overcapacity or overcapitalisation and we do not have a reliable 'balance metric' that would allow us to assess whether a particular fleet segment is in or out of balance with its fishing opportunities. However, identifying and addressing where there is overcapacity and overcapitalization of the fleet in an attempt to achieve sustainable exploitation of marine living resources, led to the introduction of policies aimed at addressing such problems in the most recent reform of the CFP (Art 22 of Regulation (EU) No 1380/2013).

Under that regulation, Member States are requested to deliver a fleet report by May 31st each year which should include values for a number of biological, economic and technical indicators to 'indicate' those fleet segment that according to certain criteria, as specified in the Commission guidelines (COM (2014) 545), are out of balance. STECF has stated several times that no single indicator value, taken in isolation can determine imbalance in a fleet segment, as there are many additional factors which influence fishing activities and such factors together with the results of other indicators need to be taken into account in carrying out an assessment of balance.

In previous reports, the STECF has pointed out that the current biological indicators (SHI and SAR) are subject to interpretation and therefore additional indicators may provide MS with a better picture on imbalances in the fleet or help them to manage their national fleet (e.g. STECF 15-02, STECF 15-05 and STECF 18-04). In addition, STECF 18-04 also proposed certain changes to the economic indicators prescribed in the Commission guidelines and suggested that the utility of additional indicators be investigated.

On the basis of a proposal by the STECF (STECF 19-13, STECF 18_04) DG Mare requested STECF to compute values for the following additional indicators: Number of overfished stocks (NOS), Economic dependency indicator (EDI), Number of stocks at risk (NSR) and Restricted Sustainable harvest indicator (SHI_R).

In addition, the Expert group is requested to comment on the robustness and sensitivity of those indicators in relation to data availability in Area 27, Area 37, long distance fleets and outermost regions and their suitability for assessing the balance between capacity and fishing opportunities.

For this report the EWG analysed the pros and cons for the individual indicators, computed values, assessed their robustness and sensitivity and provided examples to illustrate the problems and advantages of the proposed indicators.

Current indicators SHI and SAR

Sustainable Harvest Indicator (SHI)

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 FMSY values over time (F / Fmsy > 1), and reliance is calculated in economic terms (landed value). Where FMSY 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 Commission guidelines this could be an indication of imbalance if it has occurred for three consecutive years. A shorter time period should be considered in the case of small pelagic species.

Over the last years the EWGs involved with the assessment of balance have listed the advantages and disadvantages of the indicator and suggested changes to remove some of the biases (see third column Table 3.3.1.)

Table 3.3.1. Pros and Cons of the SHI indicator

Indicator	Pros	Cons	Possible improvements
SHI	• SHI is a proxy for the state of exploitation by a fleet compared to a reference level (MSY) and has a well-defined target (i.e. achieve 1). • There is no threshold effect on the overfished or not considered stocks. This is because the F/Fmsy value is on a continuous scale along 0-Inf. It could occur when the selection of stock is based on a threshold as for other indicators. The weighted average of F/FMSY ratios in SHI ensures than all stocks are included in the computation. • Using the monetary value of landings to weight the contribution in the SHI computation considers a fleet as an economic actor. It provides an integrated bioeconomic indicator instead of a strict biological indicator.	• Because it is an averaging, the SHI may deliver a value of equal or less than 1 for fleet segments which partly rely on individual stocks harvested at rates above FMSY. • A few stocks with a few very high assessed Fs may lead to remarkably high SHI values while too high fishing mortalities are the result of generally very uncertain and unreliable assessment. • Using the monetary values of landings in the calculation may affect the more direct link between F and landing volume expressed in weight. • Interpretation of the SHI trend may be misleading by giving the wrong signal of improvement for the cases where some of the stocks are contributing temporarily or	• Use in combination with other biological indicators. • Use total catches (landings + discards) instead of landings only to calculate the SHI. • Assess to what extent the number of stocks considered in the computation is influencing. This is because when a stock is no more assessed or assessed without a conclusion, it will be no longer included in the SHI time series, in retrospect. • Standardize the indicator by applying a logarithm to the F/Fmsy ratios. This will normalize F/Fmsy below or over 1. • Substitute landings in weight to landings in value in the SHI formula, and possibly add the discard information in weight.

		permanently less to the total landing value, for example, if these stocks are for some reasons priced less, have been recently depleted, or are on a collapsing trend. Hence, the mixture of an economy to a biologic component complicates the interpretation of SHI values, especially when external economic factors influencing the value of landings come into play along with depletion of fish stocks. • SHI based on landing data downscaling the contribution and full effect of the fleet from removals accounting for discarded fish. • SHI values are not standardized for a relatively equal distance below or above the target at 1.	• Reformulate SHI by substituting the weighting average in the SHI formula with partial F proxies, in place of catch per fleet per stock over the total catch of the fleet-segment. Such a change in the SHI formula would require knowing the total catch per stock for all the stocks.

The following Figure 3.3.1 shows a time series of SHI values for a single Belgian fleet segment.

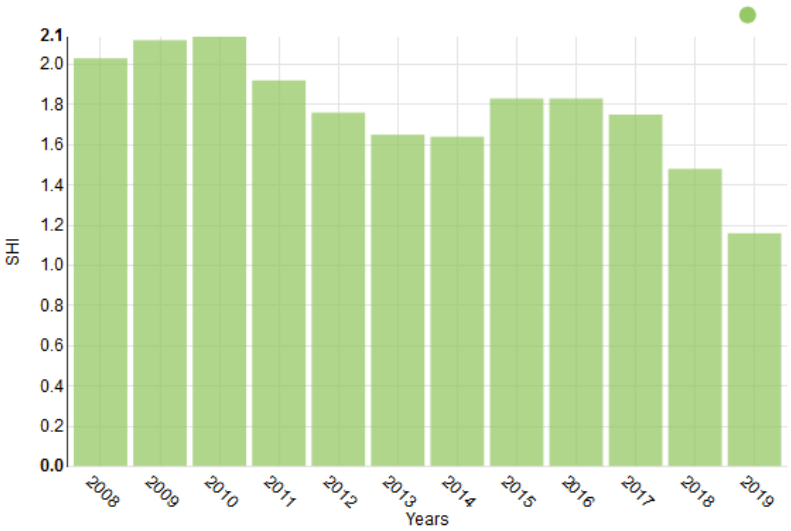
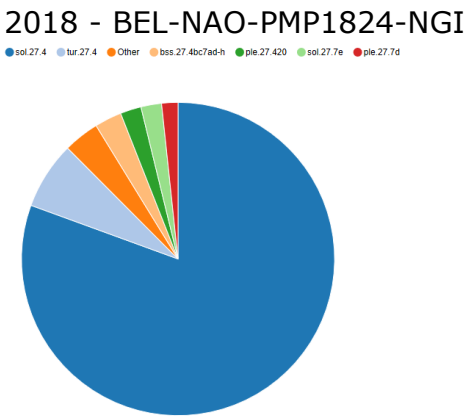
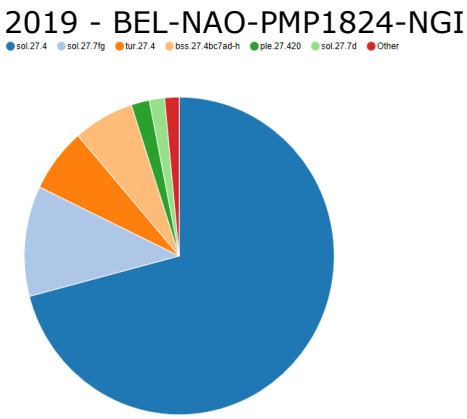


Figure 3.3.1. SHI time series for the fleet-segment BEL-NAO-PMP1824-NGI

The SHI integrates an F/FMSY ratio (Figure 3.3.2, bottom), weighted by the contribution of each stock to the total catch (landings) value (Figure 3.3.2, top). In this particular BEL-NAO-PMP1824-NGI fleet segment, the decomposition of the SHI indicator shows that the SHI value is driven by one of the many stocks fished by the segment; the Sol.27.4 stock. The improvement in SHI from 2017 to 2018 (SHI 1.8 to 1.5, Figure 3.3.1) is then the result of an F/FMSY ratio approaching 1 for this stock. In that particular case, the SHI does not reflect very well that the fleet segment continues fishing on some stocks considered overfished in the area, including cod.27.47d20, cod.27.7e-k and had27.7b-k, which are all estimated with F/FMSY close to 2 (i.e. strongly overfished). For example, ICES advised that when the MSY approach is applied, there should be zero catch in 2019 for cod.27.7e-k stock (Celtic Sea cod stock).





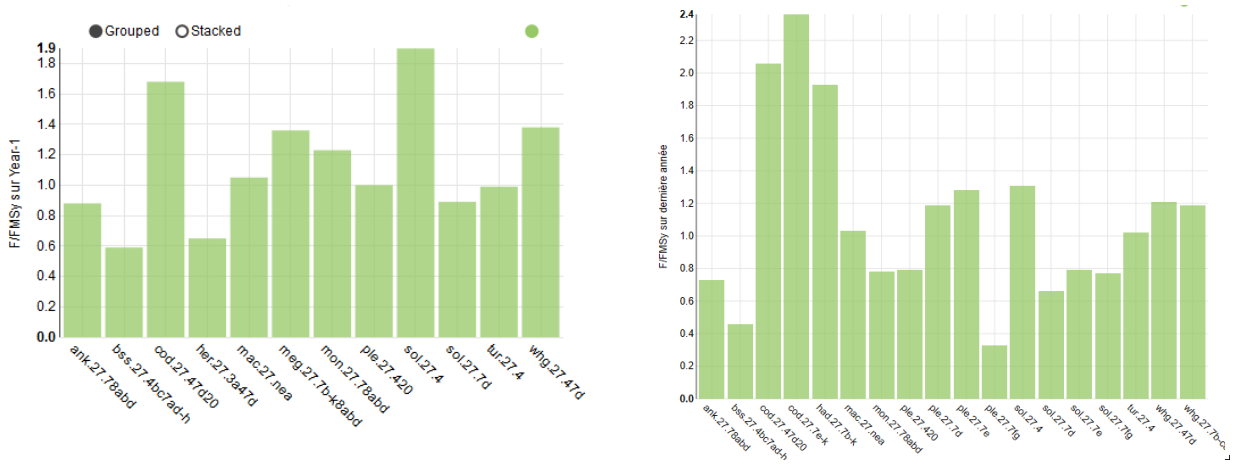


Figure 3.3.2. Top: Contribution of each stock caught by the fleet segment BEL-NAO-PMP1824-NGI to the total landing value. Bottom: F/FMSY ratios per stock caught by the segment. Left: 2017, right: 2018. Both information composes the SHI indicators, which are defined as a weighted average of F/FMSY ratios.

The proposed additional indicators (e.g. NOS and EDI) could help to better understand the dynamics of the system by providing complementary information which may provide an alternative perspective to be considerd in assessing whether the segment can be considered in or out of balance. In this case, for instance, EDI value is ca. 35%, the SAR flags the fleet segment with score 1 for the sol24.7 stock based on SAR criterion (a) (SSB<Blim) as sol24.7 represents more than 10% of the segment's landings value, NSR also scores 1, and NOS scores 10. Here the NOS is the more useful indicator of the overfishing situation for this fleet-segment as NSR is only flagging the one stock which is below Blim. From this augmented perspective, we cannot attribute the apparent improvement in SHI between 2017 and 2018 to a change in the fleet segment (composition and/or activity and/or behaviour) or a change in in fishing opportunities and EDI and NOS would provide additional information to judge on where the improvement comes from (see Figure 3.3.3).
In its current formula, the SHI has inherent difficulty in identifying the effects of technical interactions and shared stocks (for example see the hypothetical example below). None of the proposed additional indicators are able to help in this regard. Hence, the SHI should be interpreted bearing in mind the contribution of the fleet segment's catches to the total catches made on overfished stocks.

EDI NOS NRS

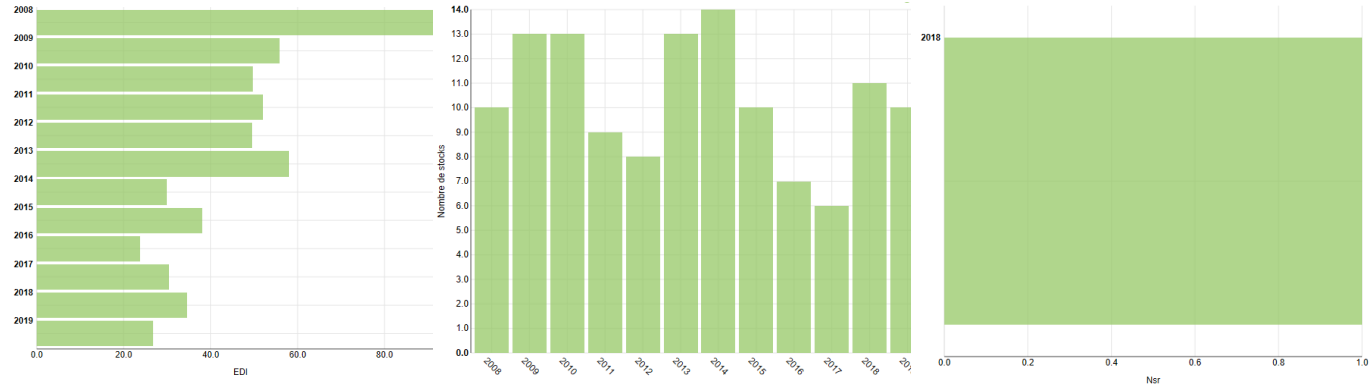


Figure 3.3.3. Time series for additional indicators to refine the evaluation of the fleet segment BEL-NAO-PMP1824-NGI

In the hypothetical example below, we show that in the typical situation where several fleets exploit the same stocks at the same time, the proportion of the total catches from overfished stocks taken by each segment would not be equal. However, the impacts of the different segments on the stocks in question would not be reflected in the SHI values for each segment. The SHI in its current formulation will most likely identify the segments with the smallest impact as being out of balance rather than those with the largest impacts. Such a situation arises because the SHI not weighted by their total catch per stock (partial F proxies):

Fleet	Stocks	Catches (euros)	F/Fmsy
1	S1	100	1.6
	S2	100	1.0
2	S1	30	1.6
	S2	1	1.0

Here the SHI for fleet 1 is: 100/200*1.6 + 100/200*1.0 =1.3
And SHI fleet 2 is: 30/31*1.6 + 1/31*1.0 =1.58

If SHI would include partial Fs proxies instead:
SHI for fleet 1 would compute as: 100/130*1.6 + 100/101*1.0 =2.22
SHI fleet 2 would compute as: 30/130*1.6 + 30/31*1.0 =1.33

In the above hypothetical example, it is clear that fleet 2 has far less impact on the stocks than fleet 1 (lower catches), the SHI value indicates that fleet 2 exhibits greater imbalance than fleet 1. Hence, taking the absolute values for the SHI for each fleet, would then require to downplay the estimated differences among fleets. It would not be worth to compare the fleet segments on the basis of their respective SHI values, because the 2 fleets does not contribute similarly to the total removals of fish. By contrast, the SHI value of one fleet could well be compared with a SHI value of the same fleet in another year.
The above example reveals that it would be necessary to further improve the indicator, test how the indicator values are influenced by partial F, and how the indicator values are affected if catch in weight is used instead of catch in value. The partial F is by

contrast measuring the contribution of a given fleet to the total fishing mortality on a stock, so, provided total catch per stock is available, reformulating SHI with partial F would give a value closer to something comparable across fleets.

Number of Stocks at Risk (SAR)

The SAR is either a measure of how much a fleet segment is linked to stocks considered to be biologically at risk or how many stocks that are biologically vulnerable are being affected by the activities of the fleet segments. According to the Commission guidelines, the selection of a stock at risk (SAR) should follow at least one of the following criteria:

a) assessed as being below the Blim;
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;
c) subject to a fishing opportunities regulation which stipulates that the fish should be returned to the sea unharmed or that landings are prohibited;
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;
2_ the fleet segment takes 10% or more of the total catches from that stock

Since the Commission guidelines were devised and published, the STECF has discussed the pros and cons and suggested possible improvements (Table 3.3.2).

Table 3.3.2. Pros, Cons and possible improvements of the SAR indicator

Indicator	Pros	Cons	Possible improvements
SAR	• The indicator, while properly interpreted could flag fleet segment dependencies on stocks at risk • It is the only indicator offering a broader vision of fleet-segment impact on species under concerns and not only on commercial (i.e. landed) and assessed ones • Broadening the assessement to include fisheries impact on marine species and ecosystems	• This indicator is easy to calculate but mixing qualitative and quantitative criteria in the selection of species that creates different potential situations • The SAR indicator can be sensitive to low catch values of SAR arising from the 10% threshold in total landing of one stock • The listing can be controversal as some qualitative criteria selection may be subject to interpretation •	• Using FDI data base could allow to improve the SAR • The SAR needs to be clearly interpreted by using • These controversial situations are not so common (10/206 in 2020) and the result of the preparatory working group allows endorsing the list. • However, the preparatory EWG reduce this risk and the proposal to dedicate a full EWG to collaborate for a shared world review of stocks status can notably improve the

			exercice. • Buy additional proposal elements to refine or complete the SAR definition, this indicator could bring a relevant evaluation of the fisheries impact on concerned stocks/habitats (cf. EWG prep Balance 2020)

Number of Overfished Stocks (NOS)

The NOS essentially indicates the number of stocks for which the ratio of F/FMSY is greater than 1.0 (i.e. stocks that at a particular point in time are being fished at rates that are not consistent with MSY) that are exploited by a fleet segment, provided that the catch of that fleet segment account for more than n% of the total catches from that stock by all segments. This means that if a fleet segment takes a catch from a stock for which F/FMSY is greater than 1.0, but that catch, represents less than or equal to n% of the total catches from that stock, the stock would not be counted in deriving the indicator value for the fleet segment.

Threshold: if a fleet segment takes more than n% of its catches from a stock for which the ratio of F/FMSY is greater than 1.0, that stock should be included for the purposes of calculating the NOS indicator value.

The n% threshold, could be

- fixed for all the stocks to highlight high fishing mortality fleet contributor i.e. fleet NOS takes into account all stocks for which the fishing mortality due to the fleet is over 10%. -

- an arbitrary threshold aimed to avoid considering fleet segments that catch very low levels of the overfished stocks in question. N is expressed as 1 / Number of fleet segments. e.g., if the number of fleet segment is 100 the threshold percentage would be 1%. If the number of fleet segments is 10, then the threshold would be 10%

<u>Algorithm steps for computing the NOS indicator values:</u>

Step 1 (F/FMSY ratio components of the NOS)

Fleet	Stocks	Catches (Tons)	F/Fmsy
A	S1	10	1.1
	S2	10	1.6
	S3	10	0.8
B	S1	30	1.1
	S2	5	1.6
	S4	20	1.4

Step 2 (Defining relative catch for alternative 2)

Stock	Total Catches	Threshold (1/N(fleet))
S1	40	0.5 (1/2)
S2	15	0.5 (1/2)
S3 The stock S3 is not kept as F/Fmsy <1	10	1 (1/1)
S4	20	1 (1/1)

Step 3 (Alternative 1 for NOS computation i.e. based on a percentage of the catch of a given fleet)

Fleet	Stocks	C_{Fleet}/C_{total}	Stock filter	NOS
A	S1	10/40=0.25	1 (0.25>=0.1)	2
	S2	10/15=0.66	1 (0.66>=0.1)	
	S3 (F/Fmsy<1)			
B	S1	30/40=0.75	1 (0.75>=0.1)	3
	S2	5/15=0.33	1 (0.33>=0.1)	
	S4	20/20=1	1 (1>=1)	

Step 4 (Alternative 2 for NOS computation i.e. based on a threshold on the relative fleet catch, all fleets catching this stock pooled)

Fleet	Stocks	C_{Fleet}/C_{total}	Stock filter	NOS
A	S1	10/40=0.25	0 (0.25<=0.5)	1
	S2	10/15=0.66	1 (0.66>=0.5)	
	S3 (F/Fmsy<1)			
B	S1	30/40=0.75	1 (0.75>=0.5)	2
	S2	5/15=0.33	0 (0.33<=0.5)	
	S4	20/20=1	1 (1<=1)	

The following table 3.3.3 provides information on robustness and sensitivity of the NOS indicator.

Table 3.3.3. Robustness and Sensitivity of NOS

Indicator	Robustness	Sensitivity	Required actions for operational use
NOS	The indicator could be considered robust when fleets are harvesting many stocks, but most of the time the NOS values for a fleet is highly dependent of few stocks. NOS is depending on the threshold defining the selection of overfished stocks to include in the computation of the indicator for a given fleet. The higher the threshold, the less the	The indicator is based on the F/Fmsy values and the sensitivity is very high when the F/Fmsy is around one (just below or just over). In contrast, the indicator does not inform about the magnitude of the overfishing because not differenetiating between close to 1 and higher value of F/FMSY ratios.	Define the threshold used to consider that a stock or a fleet should be included in the computation of the NOS. Two alternatives are suggested for defining threshold: *Alternative 1 to be a fixed minimum catch realized by the fleet-segment for the overfished stock. * Alternative 2 a moving threshold that

	stocks are selected.		defines as 1/Number of fleets. Alternative 2 risks that the fleet aggregation could be not consistent among member states. Alternative 2 also risks that when some member states are not providing their data, the NOS of the fleets of the other countries are mechanically increased. Finally, alternative 2 threshold risks that the number of fleets with a NOS informed could be inlfated whenever it would take into account fleets that are rarely catching the concerned stocks.

Economic Dependency Indicator (EDI)

The EDI essentially indicates what proportion of the landings value from a fleet segment is derived from stocks for which the ratio of F/FMSY is greater than 1.0 (i.e. stocks that at a particular point in time are being fished at rates that are not consistent with MSY). The indicator can be used to inform on how reliant a particular fleet segment is on the revenue obtained from stocks that are being exploited at a rate that is not consistent with MSY. It shows how reliant a particular fleet segment is on the revenue obtained from stocks that are being exploited at a rate that is not consistent with MSY. In 2018, STECF EWG 18-14 concluded that EDI is a very conservative indicator as it classifies all the fleet segments to be out of balance in Area 27, 37 and OFR. Therefore, the use of such indicator alone could be misleading. However, EDI can provide a good understanding of the fleets with a higher impact on the resources.

The following table 3.3.4 includes pros, cons and required actions for operational use of the EDI.

Table 3.3.4. Pros and Cons of the EDI indicator

Indicator	Pros	Cons	Required actions for operational use
EDI	EDI is easy to understand and employed. It provides a direct metric on the impact of the fleet segment on the resources.	It is very conservative and it does not have a threshold. Also, in the case of the absence of a full and constant avalibility of stock assessement can	EDI should be used always in combination with SHI and SAR. In such case can provide good indication on how to prioritize management actions on

		provide misleading outputs in the trend. Also, EDI considers on the same way a stock low or highly overexploited.	a large group of fleet segments showing unbalance from SHI and SAR. It can be improved if a similar rationale for SHI (limit of 40%) is used.

The tables below describe how the indicator values are computed. In step 1 Fleet A exploits 3 stocks and 2 of them show F/FMSY above 1 while Fleet B exploits 3 stocks all in overfishing. Step 2 shows the total catches of each fleet. In step 3 the catches of overfished stocks are estimated for each fleet and step 4 provides the EDI values for each fleet.

Algorithm steps for computing the EDI indicator values (for one year):

Step 1: F/FMSY ratio components of the EDI computation

Fleet	Stock	Catch (euros)	F/Fmsy
A	S1	10	1.1
	S2	10	1.6
	S3	10	0.8
B	S1	30	1.1
	S2	5	1.6
	S4	20	1.4

Step 2: Total catches info (in monetary value)

Fleet	Total Catch
A	30
B	55

Step 3: Total overfished catches info (in monetary value)

Fleet	Stock	Catch (euros)	CO (Catch of overfished stocks)
A	S1	10	20
	S2	10	
	S3	10	
B	S1	30	55
	S2	5	
	S4	20	

Step 4: Computation of the EDI as a percentage of the overfished catches over the total catches

Fleet	EDI
A	20/30=66%
B	55/55=100%

Table 3.3.5 includes information on robustness and sensitivity regarding the EDI indicator.

Table 3.3.5. Robustness and Sensitivity of EDI

Indicator	Robustness	Sensitivity	Required action for an operational indicator
EDI	This indicator is robust if the fleet aggregation is consistent over time. Similarly, the indicator is robust only if the set of assessed stocks are more or less the same every year.	The indicator is based on the F/Fmsy values and the sensitivity is very high when the F/Fmsy is about one (just below or just over).	This bioeconomic indicator is easy to calculate and easy to understand or to explain. The proportion of the revenue concerned by overfished stocks. No action is required to include EDI in the suite of indicators.

Restricted Sustainable harvest indicator (SHIr)

Definition:

The SHIr (Restricted SHI) has nearly the same definition as the SHI expect that computation of the SHIr is based on overfished stocks (Stocks with $F_{year}/F_{msy}>1$) only. This indicator was proposed to avoid a possibly misleading averaging problem when the fleet average includes harvesting both overexploited (F/FMSY > 1) and non-overexploited stocks (F/FMSY <= 1).

Algorithm steps for computing the SHIr indicator values **(for one year):**

Step 1: F/FMSY ratio components of the SHIr calculation

Fleet	Stocks	Catches (euros)	F/Fmsy
A	S1	10	1.1
	S2	10	1.6
	S3	10	0.8
B	S1	30	1.1
	S2	5	1.6
	S4	20	1.4

Step 2 Total overfished catches info (in monetary value)

Fleet	Total Catches of overfished stock (euros)
A	20
B	55

Step 3 SHIr calculation

Fleet	Stocks	Catches (euros)	SHIr
A	S1	10	(10*1.1+10*1.6)/20=

	S2	10	27=1.35
	S3	10	
B	S1	30	(30*1.1+5*1.6+20*1.4)/55= 69=1.25
	S2	5	
	S4	20	

In previous reports on the balance between fleet capacity and fishing opportunities the working groups have provided information on the pros and cons of the SHIr indicator and how the indicator could be made more operational (see table 3.3.6).

Table 3.3.6. Pros and Cons of SHIr

Indicator	Robustness	Sensitivity	Required actions to make the indicator operational
SHIr	This indicator, compared to the SHI, is easier to explain because it avoids averaging overfished with underfished stocks The targeted value is defined which is a SHIr at 1. This indicator is robust if the fleet aggregation is consistent over the time	As for the SHI, a few stocks with assessed F with very high values can be driven to very high value of SHI. Very high fishing mortalities is a sign for ill-formed assessements and would therefore bias the averaging SHI calculation toward very high values. As for the SHI, using the monetary values of landings in the calculation affects the direct link between F and landings As for the SHI, when a stock is no more assessed or assessed without conclusion the possibly overfished stock is no longer included in the SHI time series for that fleet and any other fleets. SHIr is misleading and could indicate a degrading status while improvement is occurring. This could happen when a stock is no more overfished. A non longer overfished stock will not be included in the calculation and the SHIr could likely mechanically	The indicator is based on the F/Fmsy values and the sensitivity is very high when the F/Fmsy is about one (just below or just over). The group concluded that, provided the cons, the SHIr should not be used.

		increase when computed from the remaining overfished stocks	

The SHIr is a subset of the SHI indicator and, therefore, did not add new information. It avoids averaging effects but stocks who are not assessed anymore are not included in the SHIr and time series of the indicator. Regarding robustness and sensitivity, the indicator has the same issues as the SHI. The EWG sees no priority to include this indicator in new guidelines in case the EC want to revise them.
Also, for this indicator the EWG provides information and robostness and sensitivity of the SHIr indicator (table 3.3.7).

Table 3.3.7. Robustness and Sensitivity analysis SHIr

Indicator	Robustness	Sensitivity	Easy and unambiguous calculation
SHIr	This indicator is robust if the fleet aggregation is consistent over the time	The indicator is based on the F/Fmsy values and the sensitivity is very high when the F/Fmsy is about one (just below or just over)	This indicator, compared to the SHI, is easier to explain because we avoid compensation effect. We still have the same comment on the mix between biological value and economic one.

Number of Stocks at Risk (NSR)

The quantitative calculation of the SAR indicator based on Blim values (criterion a) should be distinguished from the qualitative estimation of the SAR indicator (based on criteria b-d) in the future, so the origin of the data behind the SAR indicator values is clearer and the indicator is easier to interpret.
As is the case with the NOS indicator, the NSR calculated at fleet segment level should be presented together with information on (1) the number of stocks exploited by the fleet segment, and (2) on the number of these stocks for which fishing mortality and/or biomass reference points are assessed at national and international level.

Algorithm steps for computing the NSR indicator values (for one year):

Step 1. Sar Result

Fleet	Stocks at risk selected	Selection	Criteria	SAR
A	S1	P1 /P2	A/B/B	3
	S2	P1/P2		
	S3	P1/P2		
B	S1	P1/P2	A /B /A	3
	S2	P1		
	S4	P1/P2		

Step 2. NSR calculation

Fleet			Criteria	NSR
A			A/B/B	1

B			A /B /A	2

As for the other indicators also for the NSR indicator previous working groups on the balance between fleet capacity and fishing opportunities provided pros and cons and information on possible improvements of the indicator calculations or data basis for the indicator (see table 3.3.8).

Table 3.3.8. Pros, Cons and possible improvements of the NSR indicator

Indicator	Pros	Cons	Possible improvements
NSR	This indicator is using quantitative values only, is then easily replicable and less controversial than the SAR	This indicator will only include stocks 'marketable' assessed with Blim, so that half of the 2020 selection will disappear from the selection. This point is particularly crucial for Mediterranean, CECAF or OFR area for which no Blim info is available The added value of including landings of species that are of concerned internationally will not be made available anymore if NSR is replacing SAR.	Technically the NSR is already available in the SAR and already included in the calculation Table provided by the preparatory EWG. NSR is computed from selecting the SAR criteria"a".

The difference of the NSR compared to the proposed NOS indicator is that the NSR is already available in the SAR and regularly included in the table prepared by the preparatory EWG. The inclusion of the indicator in the guidelines would also not improve the ability of the MS to manage their fleets. An inclusion in revised guidelines is, therefore, not a priority.

Proposed new economic indicators

In a number of previous balance and capacity meetings[89] proposals have been made to adapt the current economic indicators as described in the Guidelines. Currently the RoFTA/RoI and the CR/BER indicators are used to assess the long-term and short-term performance of fleet segments. Assessment of the indicator results across EU fleet segments shows very high correlation between these two indicators therefore this suggests there is very little added value of using both indicators. These two economic indicators only cover the use of capital in the fishery. From an economic point of view this is problematic as there are three factors to production; capital, labour and resource. Currently, there are no indicators that consider the other two factors of production; labour and natural resources.
Therefore, the following three indicators are proposed;

Labour productivity: There is a labour productivity indicator GVA/FTE. Even if this indicator is a measure of labour productivity, it does not provide a commensurate picture between fisheries because GVA includes the capital costs. Therefore, EWG proposes to replace GVA/FTE with Net Value Added per FTE (NVA/FTE) as this indicator is comparable between fisheries.
NVA = Income from landings + other income – energy costs – repair costs – other variable costs – non variable costs – depreciation cost
NVA/FTE = NVA/FTE

Resource productivity: The resource rent is the ultimate indicator of the balance between fishing fleet and fish stocks. At present, there is no real indicator of resource productivity. Net profit as provided in the Annual Economic Report (where opportunity costs of all production factors have been considered) represent the resource rent generated by fisheries. EWG suggests including the net profit margin (net profit/current revenue –NP/CR) as the indicator of the resource productivity.
Net Profit = Income from landings + other income – crew costs – unpaid labour - energy costs – repair costs – other variable costs – non variable costs – depreciation cost – opportunity cost of capital
Net Profit Margin = Net Profit / (Income from landings + other income)

Capital productivity: Finally, in terms of the capital productivity, it is proposed to maintain the RoFTA indicator but taking into account the uncertainty around opportunity costs. The guidelines refer to the 'low risk long term interest rate'. However, the STECF balance report recognises that the 'low risk long term interest rate' which would formerly have been the ECB rate has fluctuated wildly during the years of the economic crisis and so has suggested using a 5-year average of the interest rate. The AER uses real interest rate.
RoFTA = (net profit + opportunity cost of capital) / tangible asset value (vessel depreciated replacement value)

A comparison between current and proposed new economic indicators is given in Table 3.3.9.

Table 3.3.9. Computed values for the current (old) indicators and proposed new indicators

[8] STECF 15-15
[9] STECF 18-14

		CURRENT INDICATORS					PROPOSED INDICATORS					
fs_name	Year	SAR	SHI	CR/BER	RoFTA		NOS	EDI	NSR	RoFTA	NVA/FTE	Profit Mar
IRL NAO DTS0010	2018		1.16				6	5			103,123	
IRL NAO DTS1012	2018	2	1.05	-0.46	-32.96		11	7	1	-32.96	3,009	-49.68
IRL NAO DTS1218	2018		0.96	0.10	-21.78		13	23		-21.78	12,976	-27.99
IRL NAO DTS1824	2018	3	0.92	1.05	1.54		15	26	2	1.54	37,916	0.98
IRL NAO DTS2440	2018	5	1	1.15	1.98		15	24	3	1.98	40,819	1.60
		CURRENT INDICATORS					PROPOSED INDICATORS					
fs_name	Year	SAR	SHI	CR/BER	RoFTA		NOS	EDI	NSR	RoFTA	NVA/FTE	Profit Mar
GBR NAO DTS0010 NGI	2018		0.8	1.12	1.91		17	13		1.91	22,722	2.67
GBR NAO DTS1012 NGI	2018		0.85	1.84	10.29		17	18		10.29	22,553	9.79
GBR NAO DTS1218 NGI*	2018	1	0.7	1.52	13.64		19	10		13.64	21,309	7.02
GBR NAO DTS1824 NGI	2018	5	1.02	2.20	42.33		21	32	3	42.33	39,017	14.51
GBR NAO DTS2440 NGI	2018	5	1.36	3.76	52.30		23	58	2	52.30	95,312	23.24
GBR NAO DTS40XX NGI*	2018	2	1.12	1.25	2.62		15	15		2.62	121,611	4.55
		CURRENT INDICATORS					PROPOSED INDICATORS					
fs_name	Year	SAR	SHI	CR/BER	RoFTA		NOS	EDI	NSR	RoFTA	NVA/FTE	Profit Mar
FRA NAO DTS0010 NGI	2018		0.95	1.46	21.86		13	10		21.86	75,026	10.86
FRA NAO DTS1012 NGI*	2018	2	0.89	1.43	12.97		17	14		12.97	79,982	8.14
FRA NAO DTS1218 NGI	2018	1	0.83	1.13	3.23		16	16		3.23	68,465	2.49
FRA NAO DTS1824 NGI*	2018	7	1.06	1.11	2.40		25	21	3	2.40	71,972	1.98
FRA NAO DTS2440 NGI*	2018	6	1.13	1.36	9.69		23	17	3	9.69	85,131	8.49
FRA NAO DTS40XX NGI	2018	3	1.09				11	40	1		84,955	

In the table above the demersal trawl and seine segments of Ireland, the UK and France are assessed comparing the current indicators with the proposed indicators. The current economic indicators of CR/BER and RoFTA show identical results for all DTS fleet segments in Ireland, the UK and France. In contrast, using the proposed indicators of RoFTA, NVA/FTE and Net Profit Margin highlights that there may be an issue with one additional DTS segment in the Irish fleet (Net Profit Margin). The added value of the social indicator (NVA/FTE) is that the average wage plus net profit per employee can be clearly seen between the segments. This allows assessment of the social impact of segments that may or may not be in balance. Additionally, it can indicate errors in the data where disportionately high values are shown for segments (see NVA/FTE for IRL_DTS_0010). From an economic point of view, the proposed indicators add much more value than the current indicators as the three indicators of the three factors of production indicate the returns to capital, labour and resource.

Conclusions

The EWG notes that the current suit of indicators can give MS an indication that there may be imbalance in individual fleet segments. Due to the application of the indicators from the 2014 guidelines for a substantial period of time JRC has time series of indicator values for the whole period which are robust as JRC always utilised the same data base.

The EWG concludes that the current biological indicators should be kept but it would be benefical that all MS calculate the indicators in the same way (regarding formular and input data). MS have calculated them on their own and, therefore, sometimes time series are inconsistent. It will be, however, not possible to have always longer time series for each fleet segment as clustering requirements lead to changes in fleet segmentation over the time series.

The EWG notes that previous EWG have criticized especially the biological indicators that when they are in certain range of value (F/Fmsy a little below or above 1) they are not indicating what they should indicate (that fleet segments may not be in balance although indicator values may be in a certain range, see examples for SHI). The EWG concludes that the addition of two new biological indicators (NOS and EDI) accompanying the SHI

would provide additional information for MS and DG Mare to prioritize actions on groups of fleet segments not in balance according only on SHI or SAR. As a general point a manager once had selected the fleet segments out of balance according to SHI, can rank them according to EDI or NOS values to decide which of the fleet segments would need more timely actions. Finally, by checking the SAR score and the relating stocks it could allow the degree of impact of the fleet segment on a selection of stocks or species considered threatened to be assessed. A similar approach using only SHI values could be miseleading because the avaraged values of F/FMSY, although weghted by landing values, can hide situation where fleet segments are striclty dependent on a group of stocks that are clearly subject to overfishing.

The EWG notes the assessment of robustness and limited sensitivity analysis provided in the description of the indicators reveal that NOS and EDI are robust (when always using the same data sources) and that the limited sensitivity analysis showed minor issues for the indicators. The EWG concludes that, therefore, those indicators should be included as mandatory in the next guidelines in case the EC want to change the guidelines. Those indicators will be beneficial for MS and DG MARE to improve the information on the fleet segments in balance and would help MS in the management of their fleets. Therefore, MS should consider to compute the EDI and NOS indicator values and include them in their 2021 fleet reports.

The EWG notes that the new indicator EDI can be especially benefical in cases were MS have a substantial number of fleet segments with indications of imbalance to prioritize actions (possibility by first consider those fleets with the highest dependency on overfished stocks according to the EDI).

The EWG notes that in case of the new effort management system in the Western Mediterranean and Adriatic Sea the indicators could be helpful to assess the success of the management plan as they reveal the effort the fleets issue under the management plan.

The EWG notes that the proposed new indicator SHIR should not be considered for inclusion in future guidelines as when a stock moves from overfished to sustainably fished/underfished the stock disappears from the calculation. The indicator was proposed because the SHI is misleading when many stocks are fished sustainably and only a few stocks are overfished. The SHI cannot does not take account of such situations. This is an averaging problem. Because fleets exploit a different number of stocks, 2 different fleets exploiting the same overfished stocks could have different SHI values. Specialized fleets could then be penalised with higher SHI values compared to polyvalent, indiscrimating fleets, for example. However, in such a case adding SHIR would not solve the problem but just mean to have an extra red indicator although for the fleet segment the overfished stocks may not be that important. SHIr could even indicate an increased imbalance when looking at the trend, in the situation where an overfished stock is actually no longer overfished, just because the SHIr will be an averaging of the remaining overfished stock values.

The EWG notes that for the proposed new indicator NSR there is always the problem of coverage as only stocks below Blim are considered. Therefore, mandatory provision of the NSR indicator would simply point out how many of the stocks exploited by a fleet segment are below Blim and the number of stocks for which Blim is defined may vary. It would be more informative to distinguish stocks as SAR using criterion (a) from those falling under criteria b, c, and d. It would also be useful to reinforce the criteria with

clear guidelines on critieria definition and hierarchy in order to include the ecological impact from fisheries and better fit RFMO's specificities.

The EWG proposes that a future revision of the Commission guidelines (COM (2014) 545) would benefit from the mandatory addition of two new economic indicators:

N(et)P(rofit)/C(urrent)R(evenues) and

N(et(V(alue)A(added)/F(ull)T(ime)E(quivalent)

CER/BER and GVA/FTE should be made optional. Reason for this is that the indicators RoFTA and CER/BER are quite similar in almost all cases and only address the capital productivity while the production factors labour, and resources are not addressed at all. The indicators NP/CR and NVA/FTE would address those. GVA/FTE should be replaced by NVA/FTE as GVA includes capital costs and, therefore, also addresses basically capital productivity.

3.4 Task 3 - Fleet economic v Fisheries Dependent information databases

Introduction

STECF is requested to compute indicator values using data submitted in response to the Fisheries Dependent Information (FDI) data call and compare such values with equivalent indicator values derived from data submitted in response to the fleet economic data call. The comparison should be made for at least one complete year of data by fleet segment, supra-region (FAO area 27, Area 37, OFR) and for fleet segments in the EU Outermost[10] regions (OMR). In addition, the utility and suitability of the different data sets to compute the indicator values should be discussed.

The EWG received a report from an ad hoc contract were indicators values were computed using the FDI data base and the data from the AER data base. The full report is available in Annex IV. A summary of the main findings is given below.

Comparison of data from the two data bases

The report of the ad hoc contract compares landings data from 2018 from the two datasets as well as indicator (SHI, SAR and EDI) results derived from both. Landings data (in weight and value) submitted by Member States in both data calls should be the same as they are derived from the same data source(s). However, a comparison of the two data sets revealed differences in landing values for some fleet segments. In addition, in some cases the national fleet segmentations are not perfectly matched, so a direct comparison cannot be made. This may be in part due to confidentiality reasons, where sensitive economic data (including landings' value) are reported by clustered fleet segments only.

Some of the data could also be slightly different because of the early economic data call in February. Some of the data in February are provisional and member states correct it

[10] Identified by the geographical indicator in the fleet segment name.

for the FDI data call. In the long run, this problem could be solved by merging the two databases but there is no solution yet how the AER can be finalised in July in case the transversal (FDI) data is called later in the year.

Comparison of indicator values

Calculating the indicators utilising data from the two databases also revealed differences for some fleet segments and member states (Annex IV, section beginning page 17). However, for Italy for example, no such differences in SHI values could be detected because the segmentation and the associated landings values are identical in both datasets.

The same is true for the EDI and the SAR providing that the estimates for the latter are based on landings. As the FDI data set also holds discard estimates by fleet segment there is the possibility to compute the SAR indicator using the estimated catch by fleet segment, which is more appropriate than using landings. Using catch rather than landings is likely to significantly alter the status of those fleet segments that have unwanted catches that would formerly have been discarded, provided that such catches are reported in accordance with the provisions of the landing obligation.

Focus on indicators by Supra-region (27, 37 and OFR) and Outermost Regions

Whether the biological indicators can be computed for each region and fleet segment, and their reliability, is largely dependent on data availability. To improve the coverage and reliability of the indicators, in particular for fleet segments operating in OFR and the EU Outermost regions, there is an urgent need:

1- to increase knowledge on stock status, in particular, Fishing mortality (F) and Fmsy. To do so requires an assessment model that estimates these parameters and such models have particular data requirements which for many stocks are not currently available and/or not routinely collected.

2- to strengthen the capacity of RFMOs to increase the number and quality of their stock assessments

3- to improve fisheries data collection and reporting in general and especially catch information at the stock or species level by fleet segment and at the appropriate spatial scale.

While for area 27 and 37, many stocks exploited by EU fishing vessels are assessed on an annual basis by ICES, GFCM, STECF and ICCAT (tunas and highly migratory stocks), many fleet segments exploit cephalopods and crustaceans for which estimates of F/Fmsy are not computed. There are also many other exploited marine organisms for which there are no such estimates, meaning that such stocks, some of which will be important economically, will not be taken into account when computing values for the current suite of indicators specified in the Commission guidelines.

RFMOs routinely and regularly undertake stock assessments (mainly on tuna stocks) and produce values for F/F_{msy} even though the involvement of many different countries can complicate the logistics. For other species outside areas 27 and 37, there is a shortage of stock assessments and results, due to a paucity of data and in some cases an absence of inter-state cooperation. In the Caribbean for example, there are few stock assessments for species other than tunas.

Finally, species-specific data at an appropriate spatial scale is need. In Mayotte, for example, the first species caught is "marine fishes nei", which is not useful for stock

assessment purposes. A similar problem also occurs if the fishery dependent information is not collected and reported at an appropriate spatial scale and fleet segmentation.

Conclusions

The comparison requested in the framework of ToR3 was prepared through an ad hoc contract. The contract report was available to the Expert group (see ANNEX IV). The ad hoc report focused on the SHI, EDI and SAR indicators. The main conclusions of the ad-hoc contract were that the indicators can be computed either with FDI or AER data and of course, differences in input data observed between the two sources, deliver different indicator values. Such differences can be related both to the discrepancies in fleet segment classification or clustering (as observed in the case of Belgium) and in the landings value reported by fleet segment both in term of value and weight (as observed in the case of Denmark).

The disadvantage in using the FDI data is the shorter data series (2015-2018) available compared to the AER data. While the main advantages would be the inclusion of discards in the calculation of the SAR and/or NOS indicators and the availability of catch (or landings) data at a lower aggregation level (i.e., ICES rectangle or S-square). However, the EWG 20-11 pointed out that in the FDI data, discards are estimates based on National sampling programmes that do not support the level of disaggregation of FDI data. Therefore, at the moment, the quality of discard estimates cannot be assured and should be used with caution, as these estimates might be uncertain and biased. Landings data at ICES rectangle or c-square, as opposed to sub-region (FAO level 3 or 4) in the fleet economic data, would allow for a better match with the scientific advice.

Moreover, during the EWG 20-11 it was stressed that even in the case of using the FDI data, the indicators should be always estimated at the same level of aggregation as that used for the fleet economic data and not at the *metiér* level, taking into account that MS can manage capacity mainly at fleet segment level rather than at *metiér* level.

Until harmonisation between the transversal data sets is established and the reliability of the discard data is improved, the biological indicators should continue to be calculated based on the landings data submitted through the fleet economic data call. This will guarantee the match between the biological indicators and the economic and technical indicators at the fleet segment and/or clustered fleet segment level.

3.5 Indicator Findings – Regional Overviews

Out of 628 active fleet segments in 2018, landings in weight were provided for 550 fleet segments or aggregate fleet segments, while value of landings were provided for 546 segments, i.e., not provided for 4 segments. SHI indicator values were available for 488 segments, of which 201 were considered meaningful to assess balance or inbalance. SAR indicator values were available for 165 segments and economic indicator values (CR/BER) for 382 fleet segments or aggregate fleet segments.

3.5.1 NAO – North Atlantic

Out of 371 active fleet segments in 2018, landings in weight were provided for 325 fleet segments or aggregate fleet segments, while value of landings were provided for 322 segments, i.e., not provided for 3 segments.

Sustainable Harvest Indicator (SHI)

SHI indicator values were available for 297 segments, of which 172 could not 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 125 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 2018 provided by MS, and were as follows:

- 31% (39 segments) may be in balance with their fishing opportunities;
- 69% (86 segments) may not be in balance with their fishing opportunities.

For 14 (11%) segments, an increasing trend is assessed for SHI while a decreasing trend is observed for 48 (38%) segments. A further 54 (43%) segments had no clear trend and no trend could be calculated for the remaining 9 (7%) segments.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 121 fleet segments in 2018. According to the criteria in the 2014 Commission guidelines, EWG 20-11 notes that the SAR results indicate that there were:

- 1 segment with 7 stocks-at-risk,
- 3 segments with 6 stocks-at-risk,
- 4 segments with 5 stocks-at-risk,
- 3 segments with 4 stocks-at-risk,
- 11 segments with 3 stocks-at-risk,
- 28 segments with 2 stocks-at-risk,
- 71 segments with 1 stock-at-risk.

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

The number of fleet segments or aggregate fleet segments for which *RoI* is available for 2018 in the North Atlantic region (NAO) is 77 and the number of segments for which trends are calculated is 67.

According to the criteria in the 2014 Commission guidelines, the EWG notes that the RoI indicator values for the 77 fleet segments indicate that:

- 64% (49 segments) may be in balance with their fishing opportunities.
- 26% (20 segments) may not be in balance with their fishing opportunities;
- 10% (8 segments) classified as not sufficiently profitable.

For 39 segments, an increasing trend is assessed for RoI while a decreasing trend is observed for 25 segments. A further 3 segments had no clear trend and no trend could be calculated for the remaining 10 segments.

RoFTA is available for 228 fleet segments (or clustered fleet segment). According to the criteria in the 2014 Commission guidelines, the EWG notes that the RoFTA indicator values for the 228 fleet segments indicate that:

- 78% (179 segments) may be in balance with their fishing opportunities.
- 20% (45 segments) may not be in balance with their fishing opportunities;
- 2% (4 segments) are classified as not sufficiently profitable.

For 123 segments, an increasing trend is assessed for RoFTA while a decreasing trend is observed for 84 segments. A further 3 segments had no clear trend and no trend could be calculated for the remaining 18 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 228.

According to the criteria in the 2014 Commission guidelines the Expert group notes that the CR/BER indicator values for the 228 fleet segments for which balance/out of balance was calculated indicate that:

- 80% (183 segments) may be in balance with their fishing opportunities.
- 20% (45 segments) may not be in balance with their fishing opportunities;

An increasing trend for *CR/BER* was assessed for 105 (46%) fleet segments while a decreasing trend was observed for 61 (27%) segments. A further 44 (19%) fleet segments had no clear trend and no trend could be calculated for the remaining 18 (8%) segments.

The Vessel Use Indicator (or Vessel Utilisation ratio)

The Vessel Use Indicator (VUR) was available for 181 fleet segments in NAO in 2018. According to the criteria in the 2014 Commission Guidelines, the expert group notes the VUR indicator values indicate that:

- 45% (82 segments) may be in balance with their fishing opportunities;
- 55% (99 segments) may not be in balance with their fishing opportunities.

A decreasing trend for the Vessel Use Indicator was assessed for 3 fleet segments while an increasing trend was observed for 15 segments. No clear trend was found for 108 fleet segments and no trend could be calculated for the remaining 55 segments.

The Vessel Use Indicator (VUR_{220}) was available for 242 fleet segments in NAO in 2018. According to the criteria in the 2014 Commission guidelines EWG notes that the VUR_{220} indicator values indicate that:

- 36% (88 segments) may be in balance with their fishing opportunities;
- 64% (154 segments) may not be in balance with their fishing opportunities.

A decreasing trend for the VUR_{220} Indicator was assessed for 4 fleet segments while an increasing trend was observed for 6 segments. No clear trend was found for 218 fleet segments and no trend could be calculated for the remaining 14 segments.

The Inactive Fleet Indicators

The EU inactive fleets in the North Atlantic (NAO) comprised 72 segments in 2018, of which 87.5% were in balance and 12.5% were out of balance, according to the guidelines.

Overall, 12 fleet segments showed a decreasing trend in the number of inactive vessels and 16 showed an increasing trend. A further 32 segments showed no clear trend, 1 segment showed a flat trend and no trend could be calculated for the remaining 11 segments.

3.5.2 MBS - Mediterranean and Black Sea (area 37)

Out of 198 active fleet segments in 2018, landings in weight and value were provided for 173 fleet segments or aggregate fleet segments.

Sustainable Harvest Indicator (SHI)

SHI indicator values were available for 153 segments, of which 88 could not 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 65 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 51% of the total value of the landings in 2018 provided by MS, and were as follows:

- 2% (1 segment) may be in balance with their fishing opportunities;
- 98% (64 segments) may not be in balance with their fishing opportunities.

For 13 (20%) segments, an increasing trend is assessed for SHI while a decreasing trend is observed for 16 (25%) segments. A further 15 (23%) segments had no clear trend, 1 segment (2%) showed a flat trend and no trend could be calculated for the remaining 20 (31%) segments.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 40 fleet segments in 2018. According to the criteria in the 2014 Commission guidelines, EWG 20-11 notes that the SAR results indicate that there were:

- 1 segment with 4 stocks-at-risk,
- 4 segments with 3 stocks-at-risk,
- 5 segments with 2 stocks-at-risk,
- 30 segments with 1 stock-at-risk.

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

The number of fleet segments or aggregate fleet segments for which RoI is available for 2018 in the Mediterranean and Black Sea (MBS) is 21 and the number of segments for which trends are calculated is 13.

According to the criteria in the 2014 Commission guidelines, the EWG notes that the RoI indicator values for the 77 fleet segments indicate that:

- 76% (16 segments) may be in balance with their fishing opportunities.
- 14% (3 segments) may not be in balance with their fishing opportunities;
- 10% (2 segments) classified as not sufficiently profitable.

For 10 segments, an increasing trend is assessed for RoI while a decreasing trend is observed for 3 segments. No clear trend and no trend could be calculated for the remaining 8 segments.

RoFTA is available for 134 fleet segments (or clustered fleet segment). According to the criteria in the 2014 Commission guidelines, the EWG notes that the RoFTA indicator values for the 228 fleet segments indicate that:

- 64% (86 segments) may be in balance with their fishing opportunities.
- 31% (41 segments) may not be in balance with their fishing opportunities;
- 5% (7 segments) are classified as not sufficiently profitable.

For 72 segments, an increasing trend is assessed for RoFTA while a decreasing trend is observed for 21 segments. A further segment had no clear trend and no trend could be calculated for the remaining 39 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 134.

According to the criteria in the 2014 Commission guidelines EWG notes that the CR/BER indicator values for the 134 fleet segments for which balance/out of balance was calculated indicate that:

- 68% (91 segments) may be in balance with their fishing opportunities.
- 32% (43 segments) may not be in balance with their fishing opportunities;

An increasing trend for *CR/BER* was assessed for 66 (49%) fleet segments while a decreasing trend was observed for 14 (10%) segments. A further 14 (10%) segments had no clear trend and no trend could be calculated for the remaining 40 (30%) segments.

The Vessel Use Indicator (or Vessel Utilisation ratio)

The Vessel Use Indicator (VUR) was available for 119 fleet segments in MBS in 2018. According to the criteria in the 2014 Commission guidelines EWG notes that the VUR indicator values indicate that:

- 39% (47 segments) may be in balance with their fishing opportunities;
- 61% (72 segments) may not be in balance with their fishing opportunities.

A decreasing trend for the Vessel Use Indicator was assessed for 5 fleet segments while an increasing trend was observed for 7 segments. No clear trend was found for 60 segments, one segment showed a flat trend and no trend could be calculated for the remaining 46 segments.

The Vessel Use Indicator (VUR_{220}) was available for 138 fleet segments in MBS in 2018. According to the criteria in the 2014 Commission guidelines EWG notes that the VUR_{220} indicator values indicate that:

- 20% (27 segments) may be in balance with their fishing opportunities;
- 80% (111 segments) may not be in balance with their fishing opportunities.

A decreasing trend for the VUR_{220} Indicator was assessed for 9 fleet segments while an increasing trend was observed for 2 segments. No clear trend was found for 89 fleet segments and no trend could be calculated for the remaining 38 segments.

The Inactive Fleet Indicators

The EU inactive fleets in the MBS comprised 46 segments in 2018, of which 96% were in balance and 4% were out of balance, according to the guidelines.

Overall, 16 fleet segments showed a decreasing trend in the number of inactive vessels and 5 showed an increasing trend. A further 15 segments showed no clear trend and no trend could be calculated for the remaining 10 segments.

3.5.3 OFR - Other Fishing Regions and French Outermost Regions

Out of 59 active fleet segments in 2018, landings in weight were provided for 52 fleet segments or aggregate fleet segments and landings in value for 51 segments.

Sustainable Harvest Indicator (SHI)

SHI indicator values were available for 38 segments, of which 27 could not 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 11 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 25% of the total value of the landings in 2018 provided by MS, and were as follows:

- 82% (9 segments) may be in balance with their fishing opportunities;
- 18% (2 segments) may not be in balance with their fishing opportunities.

For 3 (27%) segments there was no clear trend and no trend could be calculated for the remaining 8 (73%) segments.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 4 fleet segments in 2018. According to the criteria in the 2014 Commission guidelines, EWG 20-11 notes that the SAR results indicate that there were:

- 2 segments with 2 stocks-at-risk,
- 2 segments with 1 stock-at-risk.

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

The number of fleet segments or aggregate fleet segments for which *RoI* is available for 2018 in OFR is 8 and the number of segments for which trends are calculated is 4.

According to the criteria in the 2014 Commission guidelines, the EWG notes that the RoI indicator values for the 8 segments indicate that:

- 50% (4 segments) may be in balance with their fishing opportunities.
- 50% (4 segments) may not be in balance with their fishing opportunities.

For 2 segments, an increasing trend is assessed for RoI while a decreasing trend is observed for 2 segments. No trend could be calculated for the remaining 4 segments.

RoFTA is available for 20 fleet segments (or clustered fleet segment). According to the criteria in the 2014 Commission guidelines, the EWG notes that the RoFTA indicator values for the 20 segments indicate that:

- 55% (11 segments) may be in balance with their fishing opportunities.
- 45% (9 segments) may not be in balance with their fishing opportunities.

For 3 segments, an increasing trend is assessed for RoFTA while a decreasing trend is observed for 4 segments. No trend could be calculated for the remaining 13 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 Commission guidelines EWG notes that the CR/BER indicator values for the 20 segments for which balance/out of balance was calculated indicate that:

- 55% (11 segments) may be in balance with their fishing opportunities.
- 45% (9 segments) may not be in balance with their fishing opportunities;

An increasing trend for *CR/BER* was assessed for 2 segments while a decreasing trend was observed for 2 segments. A further 3 segments had no clear trend and no trend could be calculated for the remaining 13 segments.

The Vessel Use Indicator (or Vessel Utilisation ratio)

The Vessel Use Indicator (VUR) was available for 19 fleet segments in OFR in 2018. According to the criteria in the 2014 Commission guidelines EWG notes that the VUR indicator values indicate that:

- 68% (13 segments) may be in balance with their fishing opportunities;
- 32% (6 segments) may not be in balance with their fishing opportunities.

An increasing trend was observed for 1 segment. No clear trend was found for 5 segments and no trend could be calculated for the remaining 13 segments.

The Vessel Use Indicator (VUR_{220}) was available for 34 fleet segments in OFR in 2018. According to the criteria in the 2014 Commission guidelines EWG notes that the VUR_{220} indicator values indicate that:

- 47% (16 segments) may be in balance with their fishing opportunities;
- 53% (18 segments) may not be in balance with their fishing opportunities.

An increasing trend was observed for 4 segments. No clear trend was found for 5 fleet segments and no trend could be calculated for the remaining 25 segments.

The Inactive Fleet Indicators

The EU inactive fleets in the OFR comprised 16 segments in 2018, of which all were in balance, according to the guidelines.
Overall, 1 segment showed an increasing trend, 1 segment showed no clear trend and no trend could be calculated for the remaining 14 segments.

3.5.4 Overview of indicators and trends for each region

Table 3.5.1 provides a summary of balance indicators and trends by fishing region.

Table 3.5.1 Summary table of balance indicator values for 2018 and trends over the period 2014-2018 at Regional level (NAO, MBS and OFR). The number of fleet segments *in balance*, *out of balance* or *not sufficiently profitable* with improved, worsened and no trends are shown. For biological indicators, decreasing trends indicate improvement; for economic indicators and VUR, increasing trends indicate improvement.

		SHI		SAR	CR/BER		RoI			RoFTA			VUR		VUR 220		Inactive vessels #	
Supra region	Status / trend	in balance	out of balance	# SAR	in balance	out of balance	in balance	out of balance	not suff. profitable	in balance	out of balance	not suff. profitable	in balance	out of balance	in balance	out of balance	in balance	out of balance
NAO	increasing	1	13		95	10	25	10	4	106	15	2	12	3	4	2	11	5
	decreasing	20	28		40	21	14	7	4	57	25	2		3	1	3	9	3
	no clear trend	17	37		34	10	3			2	1		56	52	77	141	32	
	flat/null																1	
	no trend calculated	1	8		14	4	7	3		14	4		14	41	6	8	10	1
NAO total		39	86	121	183	45	49	20	8	179	45	4	82	99	88	154	63	9
MBS	increasing		13		57	9	8		2	56	10	6	4	3	2		5	
	decreasing	1	15		4	10	3			10	11			5	2	7	14	2
	no trend		15		10	4				1			24	36	20	69	15	
	flat/null		1										1					
	no trend calculated		20		20	20	5	3		19	20	1	18	28	3	35	10	
MBS total		1	64	40	91	43	16	3	2	86	41	7	47	72	27	111	44	2
OFR	increasing				1	1	2			2	1		1		4		1	
	decreasing					2	1	1		1	3							
	no trend	2	1		2	1							3	2	5		1	
	no trend calculated	7	1		8	5	1	3		8	5		9	4	7	18	14	
OFR total		9	2	4	11	9	4	4	0	11	9	0	13	6	16	18	16	0
		49	152	165	285	97	69	27	10	276	95	11	142	177	131	283	123	11
		201		165	382		106			382			319		414		134	

North Atlantic Ocean (NAO)

Out of 125 fleet segments in the NAO for which the SHI could be estimated, 86 are indicated to be out of balance and 39 in balance with fishing opportunities. For segments for which a trend in SHI can be detected the situation is improving for 48 segments, and worsening for 14. No clear trend could be observed for 54 segments.

According to each of the the economic indicators, the majority of fleet segments in the NAO are in balance and overall, the situation appears to be improving.

No clear overall picture is depicted by the technical indicators and for the majority of segments, there is no clear trend.

Mediterranean and Black Seas (MBS)

Out of 65 fleet segments in the MBS for which the SHI could be estimated, 64 are indicated to be out of balance and 1 in balance with fishing opportunities. For segments for which a trend in SHI can be detected the situation is improving for 15 segments, and worsening for 13. No clear trend could be observed for 13 segments.

According to each of the the economic indicators, the majority of fleet segments in the NAO are in balance and overall, the situation appears to be improving

The technical indicators suggest that the majority of fleet segemnts are out of balance although this is to be expected, since many segments are small-scale part time segments for which the VUR and Inactive vessel indicators are most likely largely uninformative.

Other fishing regions (OFR)

Indicator values for all indicators could be computed only for a small number of fleet segments. Out of 11 fleet segments in for which the SHI could be estimated, 2 are indicated to be out of balance and 9 in balance with fishing opportunities. No increasing or decreasing trends were observed so it remains unknown whether according to the SHI the situation is improving or worsening.

For the limited number of segments for which economic indicators could be computed, the majority are indicated to be in balance. The data are too sparse to comment on whether according to economic indicators the situation is improving or worsening.

The technical indicators imply that the fleet segments are generally in balance.

3.6 Task 4 - Indicator Findings – National Sections[11]

Introduction

In this section, the following information is presented for each Member State in response to **Task 4** of the terms of reference. Unless specifically mentioned, indicator values are for the reference year 2018 or 2019 for capacity indicators.

Task 4a. ***Overview of indicator findings:*** For each indicator, an overview of indicator values for fleet segments and whether according to the guidelines (COM (2014) 545 Final) they are in balance or out of balance with fishing opportunities. Indicator values referred to, are those computed by the EWG 20-11 based on data submitted by Member States under the 2020 fleet economic data call and the most recent assessments and advice for relevant scientific bodies on stock status and exploitation rates. Where applicable, trends in indicator values are also summarised as increasing, decreasing or no clear trend. Since an increasing or decreasing trend indicates an improving or worsening situation depending on the indicator, the trend descriptors increasing and decreasing in the text are written in green (improving situation) or red (worsening situation) font. No clear trend is is written in blue font.

A synthesis of indicator values and trends for each Member State is given at the end of each national section.

In addition to the indicators in the Commission guidelines, the Expert group 20-11 has routinely computed values for the EDI and the NOS indicator, following the apprach proposed in EWG 18-14.

Task 4c. ***Comparison of indicator values.*** A comparison between indicator values and trends computed by the EWG 20-11 with those in the fleet reports submitted by 31 May 2020 by the Member States under Article 22.2 and 22.3 of Regulation (EU) 1380/2013.

Tasks 4b. ***Assessment of fleet report.*** The EWG opinion on whether the report submitted by 31 May 2020 by the Member State under Article 22.2 and 22.3 of Regulation (EU) 1380/2013 provides a sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments, based on DCF information and in line with the Commission guidelines COM(2014)545. Where appropriate, discrepancies and shortfalls are indicated.

Task 4d. ***Measures in new action plans.*** A summary of measures proposed in new or revised action plans and whether they are appropriately targeted, timebound and are likely to contribute to redressing the imbalance in the fleet segments concerned.

3.6.1 Belgium (BEL)

Overview of indicator findings

Area 27

[11] Complimentary data for SHI and SAR are available in ANNEXES II-VII

There were 13 fleet segments in the Belgian fleet in 2018, of which 10 were active. Of the 10 active fleet segments, landings and economic data were provided aggregated in 4 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 10 active fleet segments in 2018, SHI indicator values were available for 4 fleet segments.

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.

The 2 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 85.05% of the total value of the landings in 2018 provided by MS, and were as follows:

- 1 segment may *not be in balance* with their fishing opportunities;
- 1 segment may be *in balance* with their fishing opportunities.

Trends were available for the 2 fleet segments:

- 2 segments displayed a decreasing trend.

Stocks at Risk Indicator (SAR)

For 2 active fleet segments in 2018, one or more stock at risk was detected:

- 2 segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments			4	

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	3	1		

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

RoI was not calculated.

RoFTA was calculated for 4 segments:

- 3 segments were *in balance* with their fishing opportunities,
- 1 segment was *out of balance* with their fishing opportunities.

Trends were calculated for 4 segments:

- 3 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend.

The 3 segments *in balance* displayed an increasing trend while the segment found to be *out of balance* displayed a decreasing trend, i.e., a deterioration.

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

CR/BER was calculated for 4 segments:

- 3 segments were *in balance* with their fishing opportunities,
- 1 segment was *out of balance* with their fishing opportunities.

Trends were calculated for 4 segments:

- 2 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend,
- 1 segment displayed no clear trend.

The 3 segments *in balance* displayed an increasing trend while the segment *out of balance* displayed a decreasing trend, i.e., a deterioration.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The data required to calculate VUR (i.e., maximum days-at-sea) were provided by the MS and thus, VUR_{220} is not analysed here.

VUR was calculated for 4 segments:

- All 4 segments were *in balance* with their fishing opportunities.

Trends were calculated for 4 segments:

- All 4 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, there were 3 inactive vessel length groups (VL1218, VL1824 and VL2440). In previous years (2008-2016), these length classes were clustered into one segment (VL2440); hence, no trends are available.

In total, inactive vessels accounted for 5.7% of the total number of vessels, 3.9% of the total GT and 4.1% of the total kW. At the national level, inactive vessels accounted for less than 20% of the fleet, i.e., were *in balance* in all 3 categories (#, GT and kW).

Synthesis of indicators and trends

Based on indicator values for 2018 and trends over 2014-2018 and according to the criteria in the Commission guidelines, the majority of fleet segments appear to in balance with fishing opportunities. The exception is the PMP 1824 NGI segment for which all values except VUR indicate an imbalance. The biological indicators suggest that the TBB 2440 NGI segment may also be out of balance, although the trend in SHI sows an improving situation (decreasing trend in SHI).

These observations are largely in line with the assessment of balance in the Member States' fleet report submitted in 2020 although no action plan was proposed for unbalanced segments.

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
NAO	DTS	VL1218	BEL NAO DTS2440 NGI*	1																			
NAO	DTS	VL1824	BEL NAO DTS2440 NGI*	8																			
NAO	DTS	VL2440	BEL NAO DTS2440 NGI*	6																			
NAO	DRB	VL1824	BEL NAO PMP1824 NGI*	1																			
NAO	DRB	VL2440	BEL NAO PMP1824 NGI*	1																			
NAO	PMP	VL1012	BEL NAO PMP1824 NGI*	1																			
NAO	PMP	VL1824	BEL NAO PMP1824 NGI*	1																			
NAO	TBB	VL1218	BEL NAO TBB1824 NGI*	2																			
NAO	TBB	VL1824	BEL NAO TBB1824 NGI*	18																			
NAO	TBB	VL2440	BEL NAO TBB2440 NGI	27																			
NAO	INACTIVE	VL1218	BEL NAO INA1218 NGI	1																			
NAO	INACTIVE	VL1824	BEL NAO INA1824 NGI	2																			
NAO	INACTIVE	VL2440	BEL NAO INA2440 NGI	1																			
BEL Total				70																			

Comparison of indicator values

Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are compared in Annex II to this report.

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

The comparison between SHI values reported in the Belgium annuel fleet report and those estimated in the framework of EWG 20-11 for 2018 revealed similar output for the fleet BEL NAO DTS2440 NGI*. The EWG noticed that the fleet BEL NAO TBB2440 NGI were "out of balance" (SHI = 1.01), while the Belgium report indicated "in balance" (SHI = 0.99). In addition, for the fleet BEL NAO PMP1824 NGI*, the Belgium report estimated the fleet "out of balance", while the EWG 20-11 considered the SHI indicator no meaningful for this fleet.

The comparison between SHI trends (2013-2018) reported in the MS annual report and those estimated in the framework of EWG 20-11 revealed similar outputs.

<u>Stocks at Risk Indicator (SAR)</u>

A discrepancy has been observed in the calculation of SAR between the MS annual fleet report and the ones estimated in the framework of the EWG 20-11. According to the MS fleet report in 2018, BEL NAO TBB2440 NGI, one stock at risk was detected: the plaice

7h. The report indicated that this catch was marginal in relation to the quantity landed by the fleet segment and considered it "in balance".

According to the EWG 20-11, BEL NAO TBB2440 NGI and BEL NAO PMP1824 NGI* were "out of balance" based on the SAR indicator.

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

The comparison between CR/BER reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 similar outputs for all values: BEL NAO DTS2440 NGI*, BEL NAO TBB1824 NGI* and BEL NAO TBB2440 NGI were "in balance" in 2018 while BEL NAO PMP1824 NGI* were "not in balance".

The MS report precised that BEL NAO PMP1824 NGI* was not really a fleet segment but rather a heterogeneous group of four remaining fishing vessels. So, the Belgium report considered all fleet segments "in balance" according to the CR/BER indicator.

No trends were provided in the fleet report.

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

The comparison between RoFTA reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed different values of indicator but similar outputs for all values, and similar to CR/BER indicator : BEL NAO DTS2440 NGI*, BEL NAO TBB1824 NGI* and BEL NAO TBB2440 NGI were "in balance" in 2018 while BEL NAO PMP1824 NGI* were "not in balance".

No trends were provided in the fleet report.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

The comparison between VUR reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for all values.

No trends were provided in the fleet report.

Inactive Fleet Indicator

The comparison between Inactive vessels indicator reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for all values.

Assessment of fleet report

The fleet report submitted by Belgium provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments.

The fleet report submitted by Belgium is in line with the Commission guidelines COM(2014)545.

The current Belgian management system is considered by the MS to be well functioning in order to secure a balance between fishing opportunities and capacity. The main fleet segments were assessed to be in balance in fleet report for 2019. Therefore, there are no action plans proposed.

Moreover, to improve fleet management and in the context of the North Sea, North-Western waters and South-Western waters discard plans (Regulations (EU) 2018/2035, 2018/2034 and 2018/2033 respectively), intensive use is made of selective and targeted fishing using the appropriate resources such as Benthos release panels or flip-up ropes in the North Sea and North-Western waters, where plaice survival rates are high.

Measures in action plans

No new or revised action plans were proposed.

3.6.2 Bulgaria (BGR)

Overview of indicator findings

Area 37

There were 28 fleet segments in the Bulgarian fleet in 2018, of which 24 were active. Of the 24 active fleet segments, landings data were provided for all segments while economic data were provided aggregated in 15 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 24 fleet segments active in 2018, SHI indicator values were available for 24 fleet segments.

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 18 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 77.07% of the total value of the landings in 2018 provided by MS, and were as follows:

- 18 fleet segments may *not be in balance* with their fishing opportunities.

Trends could be calculated for 8 fleet segments:

- 6 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend,
- 1 segment displayed no clear clear trend.

Stocks-at-Risk Indicator (SAR)

The SAR indicator was available for 5 fleet segments in 2018. For all 5 fleet segments, one or more stocks-at-risk were detected:

- 5 segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments		1	2	21

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/Fmsy is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	3	5	7	9

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

RoI was not calculated.

RoFTA was calculated for the 15 segments:

- 9 segments were *in balance* with their fishing opportunities,
- 6 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 10 segments:

- 8 segments displayed an increasing trend,
- 2 segments displayed a decreasing trend.

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

CR/BER was calculated for 15 segments:

- 9 segments were *in balance* with their fishing opportunities,
- 6 segments were *out of balance* with their fishing opportunities,

Trends could be calculated for 10 segments:

- 7 segments displayed an increasing trend,
- 3 segments displayed a decreasing trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The data required to calculate VUR (i.e., maximum days-at-sea) were provided by the MS and thus, VUR_{220} is not analysed here.

VUR was calculated for 15 segments:

- 4 segments were *in balance* with their fishing opportunities,
- 11 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 10 segments:

- 3 segments displayed an increasing trend
- 7 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, 4 vessel length classes had inactive vessels (VL0006, VL0612, VL1218 and VL1824).

The total inactive fleet accounted for 35.4% of the total number of vessels, 21.6% of the total GT and 28.6% of the total kW. At the national level, inactive vessels accounted for

more than 20% of the fleet in all 3 categories (#, GT and kW), and thus, *out of balance,* but displayed decreasing trends.

The fleet segment with the highest level of inactivity was the VL0612 group with 21.4% in terms of number of vessels, 14.1% in GT and 20.8% in kW. The other 3 length groups were *in balance* for the 3 categories (#, GT and kW).

Synthesis of indicators and trends

Based on indicator values for 2018 and trends over 2013-2018 and according to the criteria in the Commission guidelines, the majority of fleet segments appear to be out of balance with fishing opportunities. Exceptions exist for PMP and TM fleet segments for CR/BER and RoFTA, where fleet segments appear to be in balance. The biological indicators suggest that all fleet segments are also out of balance. The trend in SHI for fleet segment TM 1218 shows a decreasing trend in SHI, while the trend in the rest of the fleet segments is increasing.

These observations are largely in line with the assessment of balance in the Member States' fleet report submitted in 2020 although no action plan was proposed for unbalanced segments.

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
MBS	DFN	VL0006	BGR MBS DFN0006 NGI	304																			
MBS	DFN	VL0612	BGR MBS DFN0612 NGI	457																			
MBS	DFN	VL1218	BGR MBS DFN1218 NGI*	7																			
MBS	FPO	VL0006	BGR MBS FPO0612 NGI*	2																			
MBS	FPO	VL0612	BGR MBS FPO0612 NGI*	34																			
MBS	HOK	VL0006	BGR MBS HOK0006 NGI	12																			
MBS	HOK	VL0612	BGR MBS HOK0612 NGI	26																			
MBS	PGP	VL0006	BGR MBS PGP0612 NGI*	7																			
MBS	PGP	VL0612	BGR MBS PGP0612 NGI*	12																			
MBS	PGP	VL1218	BGR MBS PGP0612 NGI*	2																			
MBS	PMP	VL0006	BGR MBS PMP0006 NGI	80																			
MBS	PMP	VL0612	BGR MBS PMP0612 NGI	164																			
MBS	PMP	VL1218	BGR MBS PMP1218 NGI*	16																			
MBS	PMP	VL1824	BGR MBS PMP1218 NGI*	3																			
MBS	PMP	VL2440	BGR MBS PMP1218 NGI*	1																			
MBS	PS	VL0006	BGR MBS PS 0006 NGI*	12																			
MBS	PS	VL0612	BGR MBS PS 0006 NGI*	4																			
MBS	TBB	VL0612	BGR MBS TBB1218 NGI*	3																			
MBS	TBB	VL1218	BGR MBS TBB1218 NGI*	6																			
MBS	TBB	VL1824	BGR MBS TBB1218 NGI*	2																			
MBS	TM	VL0612	BGR MBS TM 1218 NGI*	4																			
MBS	TM	VL1218	BGR MBS TM 1218 NGI*	26																			
MBS	TM	VL1824	BGR MBS TM 1824 NGI	11																			
MBS	TM	VL2440	BGR MBS TM 2440 NGI	10																			
MBS	INACTIVE	VL0006	BGR MBS INA0006 NGI	249																			
MBS	INACTIVE	VL0612	BGR MBS INA0612 NGI	399																			
MBS	INACTIVE	VL1218	BGR MBS INA1218 NGI	9																			
MBS	INACTIVE	VL1824	BGR MBS INA1824 NGI	2																			
BGR Total				1,864																			

Comparison of indicator values

A comparison Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

The comparison between SHI reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values.

The only exception was the fleet BGR MBS TM 2440 NGI for which the status in the EWG 20-11 estimation was "out of balance" and for which the MS annual report indicated "in balance".

5 fleet segments (BGR MBS DFN0006 NGI, BGR MBS PGP0006 NGI, BGR MBS PMP0612 NGI, BGR MBS PS 0006 NGI and BGR MBS PS 0612 NGI) were reported by the MS fleet report to be out of balance. The fleet segment BGR MBS FPO0612 NGI was reported by the MS fleet report to be in balance. SHI values for these segments were not computed by the expert group as catches did not meet the 40% criterion to accept the SHI value. Conversely, the expert group computed SHI values for BGR MBS PGP1218 NGI and BGR MBS PMP2440 NGI, both of which were indicated to be out of balance although there was no SHI estimate for these fleets in the fleet report.

Indicator trends were not provided in the fleet report. No comparison was possible.

Stocks at Risk Indicator (SAR)

The MS annual fleet report did not provide information for SAR.

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

The comparison between CR/BER reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values.

The only exceptions were the fleets BGR MBS FPO0612 NGI, BGR MBS PGP0612 NGI and BGR MBS TBB1218 NGI for which the status in the EWG 20-11 estimation was "in balance" for the first 2 and "out of balance" for the third respectively, and for which the MS annual report indicated "out of balance" for the first two and "in balance" for the last one, respectively.

The CR/BER was reported for the fleet BGR MBS PGP0612 NGI in the Bulgarian report but not in the framework of EWG 20-11. It was found to be "in balance".

Indicator trends were not provided in the fleet report. No comparison was possible.

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

The comparison between ROI reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values.

The only exception was the fleet BGR MBS FPO0612 NGI, for which the status in the EWG 20-11 estimation was "in balance" and for which the MS annual report indicated "out of balance".

The ROI was reported for the fleet BGR MBS PGP0612 NGI in the Bulgarian report but not in the framework of EWG 20-11. It was found to be "in balance".

Indicator trends were not provided in the fleet report.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

The MS annual fleet report did not provide information for VUR and VUR220.

Indicator trends were not provided in the fleet report. No comparison was possible.

Inactive Fleet Indicator

Inactive vessels have been reported as total number per year and is not split by fleet segments in the annual fleet report.

Additional observations on indicators.

The results for the estimated value of the SHI shown that for 17 of the segments, the value of the indicator is above 1, which may be a sign of imbalance. These segments' realized income, relies on fishing opportunities which are structurally set at higher levels than the levels of exploitation corresponding to the maximum sustainable catch. Only for 1 of these 17 segments (TM 2440) the value of the indicator is below 1 indicating that currently the segment is balanced.

The value of the CR/BER indicator for 9 segments was higher than 1. This means that these segments are profitable and able to cover their costs. The highest indicator value is observed for segment PMP 0612. Calculations are also made for the CR/BER ratio with loss of benefits included which is calculated as a product of the value of the capital assets and the average interest rate on long-term low risk investments for Bulgaria for the period 2012-2017. In long-term, the indicator has a positive value of over 1 in 9 of the segments, including 27% (332 vessels) of the fleet and with a negative value for the other 7 segments, which are unprofitable in short-term and in long-term.

There is significant increase of the ROI indicator for the segments PMP 0006, TBB 1218, TM 1824 and TM 2440. In both segments with the largest number of fishing vessels (DFN 0006 and DFN 0612), the rate of return on investment increased a bit, but remains a negative value. The ROI values for the other segments show overcapitalisation, which in the long run also makes them economically ineffective.

Assessment of fleet report

The fleet report submitted by Bulgaria provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments.

It is prepared in accordance with Article 22 of the Regulation (EU) 1380/2013 and is generally in line with Commission guidelines (COM/2014/545) except that despite indications that some segments may be out of balance, the rationale for not proposing any action plan is not explained in the report.

The fleet report indicates that implementation of fisheries management measures adopted in recent years at European and regional level has led to improved management of marine resources and their sustainable exploitation. No action plans were proposed by the MS

Measures in action plans

No new or revised action plans were proposed.

3.6.3 Croatia (HRV)

Overview of indicator findings

Area 37

There were 33 fleet segments in the Croatian fleet in 2018, of which 28 were active. Of the 28 active segments, landings data were provided for all segments while economic data were provided aggregated by 23 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 28 fleet segments active in 2018, SHI indicator values were available for 27.

According to the criteria in the 2014 Commission 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 12 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 81.58% of the total value of the landings in 2018 provided by MS, and were as follows:

- All 12 fleet segments may *not be in balance* with their fishing opportunities;

Trends could be calculated for 8 fleet segments:

- 4 segments displayed a decreasing trend,
- 4 segments displayed no clear trend.

Stocks at Risk Indicator (SAR)

The SAR indicator was detected for 1 fleet segment in 2018:

- 1 segment with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments				25

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	12	6	3	6

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

RoI was calculated for 4 fleet segments:

- 1 segment was *in balance* with their fishing opportunities,

- 1 segment was *not in balance* with their fishing opportunities,
- 2 segments were *not sufficiently profitable*.

Trends could be calculated for 3 segments:

- 3 segments displayed an *increasing* trend.

RoFTA was calculated for 23 segments:

- 8 segments were *in balance* with their fishing opportunities,
- 11 segments were *not in balance* with their fishing opportunities,
- 4 segments were *not sufficiently profitable*.

Trends could be calculated for 15 segments:

- 11 segments displayed an increasing trend,
- 4 segments displayed a decreasing trend.

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

CR/BER was calculated for 23 segments:

- 11 segments were *in balance* with their fishing opportunities,
- 12 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 15 segments:

- 12 segments displayed an increasing trend,
- 3 segments displayed a decreasing trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The data required to calculate VUR (i.e., maximum days-at-sea) were provided by the MS and thus, VUR_{220} is not analysed here.

VUR was calculated for 23 segments:

- 5 segments were *in balance* with their fishing opportunities,
- 18 segments were *not in balance* with their fishing opportunities.

Trends could be calculated for 15 segments:

- 1 segment displayed an increasing trend,
- 1 segment displayed a decreasing trend,
- 13 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, 5 vessel length classes had inactive vessels (VL0006, VL0612, VL1218 VL1824 and VL2440).

The Croatian inactive fleet accounted for 21.6% of the total number of vessels, 30.7% of the GT and 29.7% of the kW. At the national level, inactive vessels accounted for more than 20% of the fleet in all 3 categories (#, GT and kW), and thus, *out of balance,* but displayed decreasing trends apart from inactive kW, which displayed no clear trend.

By length group, all 4 segments were *in balance* (<20%) and mostly displayed decreasing trends for vessel numbers (#).

Synthesis of indicators and trends

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

SR	FT	VL	FS name	N vessels 2018	Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
					SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
MBS	DFN	VL0006	HRV MBS DFN0006 NGI	325																			
MBS	DFN	VL0612	HRV MBS DFN0612 NGI	664																			
MBS	DFN	VL1218	HRV MBS DFN1218 NGI	19																			
MBS	DRB	VL0612	HRV MBS DRB0612 NGI	13																			
MBS	DRB	VL1218	HRV MBS DRB1218 NGI	20																			
MBS	DTS	VL0006	HRV MBS DTS0612 NGI*	6																			
MBS	DTS	VL0612	HRV MBS DTS0612 NGI*	143																			
MBS	MGP	VL0612	HRV MBS DTS0612 NGI*	1																			
MBS	DTS	VL1218	HRV MBS DTS1218 NGI	163																			
MBS	DTS	VL1824	HRV MBS DTS1824 NGI	28																			
MBS	DTS	VL2440	HRV MBS DTS2440 NGI	9																			
MBS	FPO	VL0006	HRV MBS FPO0006 NGI	51																			
MBS	FPO	VL0612	HRV MBS FPO0612 NGI	107																			
MBS	HOK	VL0006	HRV MBS HOK0006 NGI	100																			
MBS	HOK	VL0612	HRV MBS HOK0612 NGI*	238																			
MBS	HOK	VL1218	HRV MBS HOK0612 NGI*	8																			
MBS	MGO	VL0006	HRV MBS MGO0006 NGI	266																			
MBS	MGO	VL0612	HRV MBS MGO0612 NGI*	61																			
MBS	MGO	VL1218	HRV MBS MGO0612 NGI*	2																			
MBS	PGO	VL0006	HRV MBS PGP0006 NGI*	5																			
MBS	PGP	VL0006	HRV MBS PGP0006 NGI*	2,811																			
MBS	PGP	VL0612	HRV MBS PGP0612 NGI	794																			
MBS	PMP	VL0006	HRV MBS PMP0006 NGI	29																			
MBS	PMP	VL0612	HRV MBS PMP0612 NGI	34																			
MBS	PS	VL0612	HRV MBS PS 0612 NGI	27																			
MBS	PS	VL1218	HRV MBS PS 1218 NGI	34																			
MBS	PS	VL1824	HRV MBS PS 1824 NGI	43																			
MBS	PS	VL2440	HRV MBS PS 2440 NGI	62																			
MBS	INACTIVE	VL0006	HRV MBS INA0006 NGI	690																			
MBS	INACTIVE	VL0612	HRV MBS INA0612 NGI	790																			
MBS	INACTIVE	VL1218	HRV MBS INA1218 NGI	104																			
MBS	INACTIVE	VL1824	HRV MBS INA1824 NGI	40																			
MBS	INACTIVE	VL2440	HRV MBS INA2440 NGI	44																			
HRV Total				7,731																			

Based on indicator values for 2018 and trends over 2013-2018 and according to the criteria in the Commission guidelines, the majority of fleet segments appear to out of balance with fishing opportunities. The exceptions are the DNF 0006, DNF 0612, PS 0612 to PS2440 segments for which all values except CR/BER and RoFTA indicate an imbalance. The biological indicators suggest that all segments may also be out of balance, and neither the trend in SHI do show an improving situation (decreasing trend in SHI).

These observations are in line with the assessment of balance in the Member States' fleet report submitted in 2020 and there is an action plan implemented for unbalanced segments.

Comparison of indicator values

Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are compared in Annex II.

Area 37

Sustainable Harvest Indicator (SHI)

In the MS annual fleet report the SHI has been provided for the reference year 2018.

The comparison between biological indicators reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs in terms of fleet segment status for SHI for most segments.

The only exceptions were the fleets HRV MBS FPO0006 NGI and HRV MBS PS 0612 NGI, for which the status in the EWG 20-11 estimation "out of balance", and for which the MS annual report indicated "in balance".

The MS present the last 3 years of values for SHI, but no comparison could be made as no trend assessment was presented by the MS.

Stocks at Risk Indicator (SAR)

In the MS annual fleet report no SAR has been provided for the reference year 2018 as it was estimated by the EWG 20-11 only.

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

The comparison between CR/BER reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed different outputs for most of the values. In the fleet report the opportunity cost of capital is excluded from calculation which is the main reason for a difference. Differences in values affect on final evaluations on balance/imbalance by a few fleet segments (HRV MBS DFN1218 NGI).

Regarding MS fleet report, trends for the 23 segments were as follows:

- 18 segments displayed an *increasing* trend,
- 3 segments displayed a *decreasing* trend,
- 2 segments displayed no trend (or no trend could be calculated).

Trends based on EWG 20-11 calculations for the 15 segments were as follows:

- 12 segments displayed an *increasing* trend,
- 3 segments displayed a *decreasing* trend.

The major difference between MS and EWG 20-11 trend calculation is in number of segments represent. In MS fleet report treated 23 segments, while EWG calculations are based on 15 segments.

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

The comparison between RoFTA reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for all values.

In MS fleet report trends were calculated for 23 segments:

- 21 segments displayed an *increasing* trend,
- 2 segments displayed a *decreasing* trend,

Trends based on EWG 20-11 calculations for the 15 segments were as follows:

- 11 segments displayed an *increasing* trend,
- 4 segments displayed a *decreasing* trend.

The major difference between MS and EWG 20-11 trend calculation is in number of segments represent. In MS fleet report treated 23 segments, while EWG calculations are based on 15 segments.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The comparison between VUR reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values. Minor discrepancy in values are at HRV MBS DTS0612 NGI*and HRV MBS MGO0612 NGI*. Differences in values do not affect the final evaluations on balance/imbalance by fleet segment.

Regarding MS fleet report, trends for the 23 segments were as follows:

- 1 segment displayed an *increasing* trend
- 2 segments displayed a *decreasing* trend,
- 20 segments displayed *no* trend (or no trend could be calculated).

Trends based on EWG 20-11 calculations for the 15 segments were as follows:

- 1 segment displayed an *increasing* trend
- 1 segment displayed a *decreasing* trend,
- 13 segments displayed *no* trend (or no trend could be calculated).

The major difference between MS and EWG 20-11 trend calculation is in number of segments represent. In MS fleet report treated 23 segments, while EWG calculations are based on 15 segments.

The Inactive Fleet Indicators

Inactive vessels have been reported as number, GT and kW in the MS annual fleet report, and they revealed similar outputs in term of fleet segment as the ones estimated in the framework of the EWG 20-11 dataset.

Based on EWG 20-11 estimation, trends for the 5 segments were as follows:

- 4 segments displayed a decreasing trend,
- 1 segment displayed no trend (or no trend could be calculated).

The MS present 3 segments increasing and 2 segments decreasing.

Assessment of fleet report

The fleet report submitted by Croatia provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments.

The fleet report submitted by Croatia is in line with the Commission guidelines COM (2014)545.

Based on the Overall status of the analysed fleet segments Croatia present Action plan concerning imbalanced segments.

Measures in action plans

The Action plan is an update and continuation of the Action plan from 2018 and 2019.

The MS report says: Pursuant to Action plan presented in the Fleet report for previous years, significant actions took place which resulted with overall improvement in some fleet segments. However, due to a high dependency of PS segments on only two species (sardine and anchovy) and their exploitation status, they are still showing imbalance.

That imbalance in PS segments needs to be addressed. This will be done through a set of measures directed to improvement of stock status and reduction of fishing effort. Measures will dominantly target protection of juvenile fish and redirection of fleet from the areas identified as nurseries or important for protection of early age classes of sardine and anchovy. The proposed actions for the years 2020 to 2021 are as follows.

Fleet segment		Measure	Targets	Timeframe
PS	VL1218 VL1824 VL2440	▪ Limitation of effort (whole period) ▪ Time and spatial regulation (whole period) pursuant to GFCM and national legal framework (including temporary closures of 30 days in sardine and anchovy spawning period as well as spatio-temporal regulation in channel areas) ▪ Temporary cessation (depending on the measures and the criteria for financing from public aid in the new programming period) Respecting the provision of decrease of catch level in comparison to 2014 level (5% per year 2019-2021) pursuant to GFCM emergency measures for 2019-2021 Improvement of survey and stock assessment (cont.)	▪ Improvement of SHI ▪ (Improvement of stock status of target species following GFCM emergency measures for 20192021 and improvement of recruitment through time-spatial regulation) ▪ Improvement of economic performances ▪ (Further increase of average price at first sale with impact on economic indicators, aiming to maintain the level as assessed in this Fleet report)	By the end of 2021
DTS	VL0006 VL0612 VL1218 VL1824	▪ Implementation of new MP (2020 onwards) ▪ Maintaining authorised capacity ▪ Limitation and reduction of fishing effort ▪ (2020 onwards) ▪ Time and spatial regulation (whole period) pursuant to GFCM and national legal	▪ Improvement of SHI ▪ (Improvement of stock status of target species following GFCM MP and improvement of recruitment through time-spatial ▪ regulation and FRA ▪ implementation)	By the end of 2021

	VL2440	framework (including temporary closure of ▪ 30 days) ▪ Temporary cessation for at least 30 days ▪ (2020 onwards) ▪ Prolongation of Jabuka FRA and possible implementation of additional no-take zones ▪ (depending on scientific recommendation) ▪ Improvement in MSC (cont.)	▪ Improvement of economic performances ▪ (Further increase of average price at first sale through improvement of catch composition (benefits of FRA) with impact on economic indicators aiming to achieve positive trends over 2020-21 period)	

The action plan clearly sets out the timeframe, the objectives are broad and the targets are non-specific. Hence it is not possible to judge whether the targets are likely to be achieved either within the time frame or at some future time.

3.6.4 Cyprus (CYP)

Overview of indicator findings

Area 37

There were 11 fleet segments in the Cypriot fleet in 2018, of which 7 were active. Of the 7 active segments, landings data were provided for all segments while economic data were provided aggregated by 6 segments. Due to confidentiality reasons, economic data were not provided for PS VL2440, with only one vessel.

Sustainable Harvest Indicator (SHI)

Out of the 7 fleet segments active in 2018, SHI indicator values were available for 4. However, according to the criteria in the 2014 Commission guidelines, the SHI indicator values for all 7 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 values were not calculated for any of the segments.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the 7 fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%

N of fleet segments		1	2	

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/Fmsy is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	4			

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

RoI was not calculated.

RoFTA was calculated for 6 segments:

- 2 segments were *in balance* with their fishing opportunities,
- 4 segments were *out of balance* with their fishing opportunities.

Trends were calculated for the 6 segments:

- 5 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend.

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

CR/BER was calculated for 6 segments:

- 2 segments were *in balance* with their fishing opportunities,
- 4 segments were *out of balance* with their fishing opportunities.

Trends were calculated for the 6 segments:

- 3 segments displayed an increasing trend,
- 3 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The data required to calculate VUR (i.e., maximum days-at-sea) were not provided by the MS. VUR_{220} is analysed here.

VUR_{220} was calculated for 7 segments:

- All 7 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 6 segments:

- All 6 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, 4 length classes included inactive vessels (VL0006, VL0612, VL1218 and VL2440).

The Cypriot inactive fleet accounted for 4.6% of the total number of vessels, 11.3% of the GT and 7.9% of the kW. At the national level, inactive vessels accounted for less

than 20% of the fleet in all 3 categories (#, GT and kW), and thus, *in balance,* and displayed decreasing trends.

By length group, all 4 segments were *in balance* (<20%); 2 displayed decreasing trends and 1 displayed no clear trend for inactive vessel numbers (#).

Synthesis of indicators and trends

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
MBS	DTS	VL2440	CYP MBS DTS2440 NGI*	6			out of balance	out of balance			out of balance					no clear trend	increasing			no clear trend			
MBS	PG	VL0006	CYP MBS PG 0006 NGI	29			in balance	in balance			out of balance					increasing	increasing			no clear trend			
MBS	PG	VL0612	CYP MBS PG 0612 NGI	283			in balance	in balance			out of balance					increasing	increasing			no clear trend			
MBS	PGO	VL0006	CYP MBS PGO0006 NGI	344			out of balance	out of balance			out of balance					increasing	increasing			no clear trend			
MBS	PGO	VL0612	CYP MBS PGO0612 NGI	74			out of balance	out of balance			out of balance					no clear trend	increasing			no clear trend			
MBS	PGP	VL1218	CYP MBS PGP1218 NGI*	32			out of balance	out of balance			out of balance					no clear trend	increasing			no clear trend			
MBS	PS	VL2440	CYP MBS PS 2440 NGI	1							out of balance												
MBS	INACTIVE	VL0006	CYP MBS INA0006 NGI	1								in balance	in balance	in balance							out of balance	in balance	in balance
MBS	INACTIVE	VL0612	CYP MBS INA0612 NGI	32								in balance	in balance	in balance							out of balance	no clear trend	in balance
MBS	INACTIVE	VL1218	CYP MBS INA1218 NGI	3								in balance	in balance	in balance							no clear trend	out of balance	out of balance
MBS	INACTIVE	VL2440	CYP MBS INA2440 NGI	1								in balance	in balance	in balance									
CYP Total				806																			

Based on indicator values for 2018 and trends over 2013-2018 and according to the criteria in the Commission guidelines, the majority of fleet segments appear to out of balance with fishing opportunities. However, the trend in CR/BER and RoFTA show an improving situation. The exceptions are the PG 0006 and PG 0612 segments for which CR/BER and RoFTA values indicate that are in balance.

The biological indicators cannot be used meaningfully to assess the balance or imbalance.

These observations revel some differences in the assessment of balance in the Member States' fleet report submitted in 2020. For SHI the annual fleet report indicated "in balance" and the EWG 20-11 provides no status because the landings value of assessed stocks comprises <40% of the total value. For the economic indicators, there are differences in the values but the balance/imbalance status for the segments concerned are the same.

There was no action plan proposed for unbalanced segments as the MS considers that the current Cyprus management system is functioning well with regard to securing a balance between capacity and fishing opportunities.

Comparison of indicator values

A comparison Indicator values_computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

In the MS annual fleet report the SHI has been provided for the reference year 2018.

The comparison between biological indicators reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed some discrepancies in terms of

fleet segment status for SHI in 4 fleet segments, for which the MS annual report indicated "in balance" and the EWG 20-11 estimation does not provide status due to < 40% landing value of assessed stocks.

Indicator trends were not provided in the fleet report. No comparison was possible.

Stocks at Risk Indicator (SAR)

In the MS annual fleet report no SAR indicator values were provided for the reference year 2018 as it was estimated by the EWG 20-11.

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

The comparison between CR/BER reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed different outputs for most of the values. In the fleet report the opportunity cost of capital is excluded from calculation which is the main reason for a difference. Differences in values do not affect the final evaluations on balance/imbalance by fleet segment.

In the calculations provided by EWG 20-11 there are two additional segments that are not presented in the Cyprus fleet report (CYP MBS PGO0006 NGI, CYP MBS PGO0612 NGI).

In MS fleet report not enough information are provided for trend analysis (calculations provided just for two years).

Regarding EWG 20-11 calculations, trends for the 6 segments were as follows:

- 3 segments displayed an *increasing* trend,
- 3 segments displayed no trend (or no trend could be calculated).

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

The comparison between RoFTA reported in the MS annual fleet report and hose estimated in the framework of EWG 20-11 revealed minor differences for most values.
The biggest discrepancy in values is at CYP MBS PG 0006 NGI and CYP MBS PG 0612 NGI. Differences in values do not affect the final evaluations on balance/imbalance by fleet segment.

In the calculations provided by EWG 20-11 there are two additional segments that are not presented in the Cyprus fleet report (CYP MBS PGO0006 NGI, CYP MBS PGO0612 NGI).

Not enough information is provided in MS fleet report for trend analysis (calculations provided just for two years).

Regarding EWG 20-11 calculations, trends for the 6 segments were as follows:

- 5 segments displayed an *increasing* trend,
- 1 segment displayed a *decreasing* trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

A discrepancy has been observed in the calculation of VUR between the MS annual fleet report and the ones estimated in the framework of the EWG 20-11.

In the MS annual fleet report the VUR Indicator was calculated as the ratio between days at sea and maximum days at sea for each length group and gear type.

EWG 20-11 reported the VUR220 because the data reported by the MS under DCF did not provide information on the maximum observed days at sea per fleet segment and the theoretical maximum number of days was used for the calculation.

Regarding MS fleet report, in period 2013-2018, trends for the 7 segments (based on maximum days at sea) were as follows:

- 1 segment was *in balance* with their fishing opportunities,
- 6 segments were *not in balance* with their fishing opportunities.

Regarding EWG 20-11, in period 2013-2018, trends for the 6 segments (based on VUR220) were as follows:

- All 6 segments displayed no clear trend.

The major difference between MS and EWG 20-11 trend calculation is in number of segments represent. In MS fleet report treated 7 segments, while EWG calculations are based on 6 segments.

Inactive Fleet Indicator

Inactive vessels have been reported as number, GT and kW in the MS annual fleet report, and they revealed similar outputs in term of fleet segment as those estimated in the framework of the EWG 20-11 dataset.

Assessment of fleet report

The fleet report submitted by Cyprus provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments.

The fleet report submitted by Cyprus is in line with the Commission guidelines COM(2014)545.

The current Cyprus management system is considered by the MS to be well functioning in order to secure a balance between fishing opportunities and capacity. Therefore, there is no action plan is proposed.

Measures in action plans

No new or revised action plans were proposed.

3.6.5 Denmark (DNK)

Overview of indicator findings

Area 27

There were 19 fleet segments in the Danish fleet in 2018, of which all were active (data on inactive vessels not provided). Of the 19 active segments, landings data were provided for all segments while economic data were available for 18 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 19 fleet segments active in 2018, SHI indicator values were available for 18.

According to the criteria in the 2014 Commission 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 12 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 90.66% of the total value of the landings in 2018 provided by MS, and were as follows:

- 7 segments may *not be in balance* with their fishing opportunities;
- 5 segments may be *in balance* with their fishing opportunities.

Trends were calculated for 12 fleet segments:

- 1 segment displayed an increasing trend,
- 6 segments displayed a decreasing trend,
- 5 segments displayed no clear trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 10 fleet segments in 2018.

- 1 segment with 5 stocks-at-risk,
- 1 segment with 4 stocks-at-risk,
- 4 segments with 2 stocks-at-risk,
- 4 segments with 1 stocks-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below

	0-25%	25-50%	50-75%	75-100%
N of fleet segments			12	5

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	10	7	1	

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

RoI was calculated for 18 segments:

- 10 segments were *in balance* with their fishing opportunities,
- 7 segments were *out of balance* with their fishing opportunities,
- 1 segment was *not sufficiently profitable*.

Trends were calculated for 18 segments:

- 11 segments displayed an increasing trend,
- 5 segments displayed a decreasing trend,
- 2 segments displayed no clear trend.

RoFTA was calculated for 18 segments:

- 11 segments were *in balance* with their fishing opportunities,
- 7 segments were *out of balance* with their fishing opportunities.

Trends were calculated for 18 segments:

- 12 segments displayed an increasing trend,
- 5 segments displayed a decreasing trend,
- 1 segment displayed no clear trend.

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

CR/BER was calculated for 18 segments:

- 11 segments were *in balance* with their fishing opportunities,
- 7 segments were *out of balance* with their fishing opportunities.

Trends were calculated for 18 segments:

- 10 segments displayed an increasing trend,
- 3 segments displayed a decreasing trend,
- 5 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The data required to calculate VUR (i.e., maximum days-at-sea) were not provided by the MS and thus, VUR_{220} is analysed here.

VUR_{220} was calculated for 19 segments:

- 6 segments were *in balance* with their fishing opportunities,
- 13 segments were *out of balance* with their fishing opportunities.

Trends were calculated for the 19 segments:

- 1 segment displayed an increasing trend,
- 18 segments displayed no clear trend.

The Inactive Fleet Indicators

Data on inactive vessels were unavailable.

Synthesis of indicators and trends

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
NAO	DRB	VL1012	DNK NAO DRB1012 NGI	3			out of balance	out of balance	out of balance		out of balance					out of balance	out of balance	out of balance		no clear trend			
NAO	DRB	VL1218	DNK NAO DRB1218 NGI	30			in balance	in balance	in balance		out of balance					no clear trend	out of balance	out of balance		no clear trend			
NAO	DTS	VL0010	DNK NAO DTS0010 NGI	6							out of balance									no clear trend			
NAO	DTS	VL1012	DNK NAO DTS1012 NGI	15	out of balance		out of balance	out of balance	out of balance		out of balance				out of balance	in balance	in balance	in balance		no clear trend			
NAO	DTS	VL1218	DNK NAO DTS1218 NGI	109	in balance	out of balance	in balance	in balance	not sufficiently profitable		out of balance				out of balance	no clear trend	in balance	in balance		no clear trend			
NAO	DTS	VL1824	DNK NAO DTS1824 NGI	39	in balance	out of balance	in balance	in balance	in balance		in balance				out of balance	no clear trend	out of balance	out of balance		no clear trend			
NAO	DTS	VL2440	DNK NAO DTS2440 NGI	36	out of balance	out of balance	in balance	in balance	in balance		in balance				no clear trend	no clear trend	out of balance	out of balance		no clear trend			
NAO	DTS	VL40XX	DNK NAO DTS40XX NGI	15	in balance		in balance	in balance	in balance		in balance				in balance	in balance	out of balance	out of balance		no clear trend			
NAO	PGP	VL0010	DNK NAO PGP0010 NGI	706		out of balance	out of balance	out of balance	out of balance		out of balance					in balance	in balance	in balance		no clear trend			
NAO	PGP	VL1012	DNK NAO PGP1012 NGI	49	out of balance	out of balance	out of balance	out of balance	out of balance		out of balance				out of balance	in balance	in balance	in balance		no clear trend			
NAO	PGP	VL1218	DNK NAO PGP1218 NGI	23	out of balance		in balance	in balance	in balance		out of balance				no clear trend	in balance	in balance	in balance		no clear trend			
NAO	PMP	VL0010	DNK NAO PMP0010 NGI	109		out of balance	out of balance	out of balance	out of balance		out of balance					out of balance	in balance	in balance		no clear trend			
NAO	PMP	VL1012	DNK NAO PMP1012 NGI	30	out of balance	out of balance	out of balance	out of balance	out of balance		out of balance				out of balance	no clear trend	in balance	in balance		no clear trend			
NAO	PMP	VL1218	DNK NAO PMP1218 NGI	29	in balance	out of balance	out of balance	out of balance	out of balance		out of balance				out of balance	no clear trend	no clear trend	in balance		no clear trend			
NAO	PMP	VL1824	DNK NAO PMP1824 NGI	11	out of balance	out of balance	in balance	in balance	in balance		in balance				no clear trend	in balance	in balance	no clear trend		no clear trend			
NAO	TBB	VL1218	DNK NAO TBB1218 NGI	10			in balance	in balance	in balance		out of balance					in balance	in balance	in balance		no clear trend			
NAO	TBB	VL1824	DNK NAO TBB1824 NGI	16			in balance	in balance	in balance		in balance					in balance	in balance	in balance		no clear trend			
NAO	TM	VL1218	DNK NAO TM 1218 NGI	5	out of balance	out of balance	in balance	in balance	in balance		out of balance				no clear trend	in balance	in balance	no clear trend		in balance			
NAO	TM	VL40XX	DNK NAO TM 40XX NGI	15	in balance		in balance	in balance	in balance		in balance				no clear trend	in balance	in balance	in balance		no clear trend			
DNK Total				1,256																			

Based on indicator values for 2018 and trends over 2014-2018 and according to the criteria in the Commission guidelines, six fleet segments are out of balance and two fleets are in balance for all indicators. The remaining fleets show values mostly in balance, with the only exception of DNK NAO PMP1218 NGI for which only SHI is in balance.

These observations are mostly in line with the assessment of balance in the Member States' fleet report submitted in 2020 although no action plan was proposed for unbalanced segments.

Comparison of indicator values

Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are compared in Annex II.

Sustainable Harvest Indicator (SHI)

In the MS annual fleet report the SHI has been provided for the reference year 2017, therefore EWG 20-11 compared these values with those calculated for 2017 in EWG 19-13.

The comparison between SHI values reported in the MS annual fleet report and those estimated in the framework of EWG 19-13 revealed similar outputs for most values.

The only exceptions were the fleets DNKNAOPMP1824NGI and DNKNAOTM1218NGI, for which the status in the EWG 19-13 estimation was "out of balance", while the MS annual report indicated "in balance".

In addition, for the fleet DNKNAODTS0010NGI no values were included in the MS annual report, while EWG 19-13 estimated this fleet "out of balance".

The comparison between SHI trends (2012-2017) reported in the MS annual fleet report and those estimated in the framework of EWG 19-13 revealed similar outputs for most trends.

The only exception was the trend of the fleet DNKNAOPMP1824NGI, for which the status in the EWG 19-13 estimation was "no trend", while the MS annual report indicated "decreasing".

In addition, the trend of the fleet DNKNAODTS0010NGI was not included in the MS annual report because the SHI value of 2017 was missing.

Stocks at Risk Indicator (SAR)

In the MS annual fleet report the SAR has been provided for the reference year 2017, therefore EWG 20-11 compared these values with those calculated for 2017 in EWG 19-13.

The comparison between SAR reported in the MS annual fleet report and those estimated in the framework of EWG 19-13 revealed similar status for most fleets, but the values of SAR included in the MS annual fleet report were generally higher than those estimated in EWG 19-13.

The only exceptions were the fleets DNKNAODTS0010NGI and DNKNAOTM40XXNGI, for which SAR were observed only in the MS annual fleet report (1 SAR and 4 SAR, respectively), and DNKNAOPMP0010NGI, for which 1 SAR was found exclusively in the EWG 19-13 report.

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

The comparison between CR/BER reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for all values.

No trends have been calculated in the MS annual fleet report.

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

The comparison between ROI reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values.

The only exceptions were the fleets DNKNADTS1218NGI and DNKNAOPGP1012NGI, for which the status in the EWG 20-11 estimation was "not sufficient profitable" and "out of balance", respectively, and for which the MS annual report indicated "in balance".

No trends have been calculated in the MS annual fleet report.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

A discrepancy has been observed in the calculation of VUR between the MS annual fleet report and the ones estimated in the framework of the EWG 20-11.

In the MS annual fleet report the VUR Indicator was calculated as the ratio between days at sea and maximum days at sea for each length group and gear type. A table reporting

the maximum observed days at sea per fleet segment was included in Annex 4 of the MS annual fleet report.

EWG 20-11 reported the VUR220 because the data reported by the MS under DCF did not provide information on the maximum observed days at sea per fleet segment and the theoretical maximum number of days (220) was used for the calculation.

No trends have been calculated in the MS annual fleet report.

Inactive Fleet Indicator

Inactive vessels have been reported as number, GT and kW in the MS annual fleet report, but this information is missing in the EWG 20-11 dataset, because Denmark did not provide it in responding to the fleet economic data call.

Assessment of fleet report

The fleet report submitted by Denmark provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments.

The fleet report submitted by Denmark is in line with the Commission guidelines COM(2014)545.

Measures in action plans

The current Danish management system is considered by the MS to be well functioning in order to secure a balance between fishing opportunities and capacity. Therefore, there are no action plans proposed.

3.6.6 Estonia (EST)

Overview of indicator findings

Area 27

There were 10 fleet segments in the Estonian fleet in 2018, of which 6 were active. Of the 6 active segments, landings data were provided for 5 segments and economic data were provided aggregated in 3 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 6 fleet segments active in 2018, landings in value have been provided for 5 fleet segments and SHI indicator values were calculated for all 5 fleet segments.

According to the criteria in the 2014 Commission 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.

The 3 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 63.46% of the total value of the landings in 2018 provided by MS, and were as follows:

- All 3 segments may *not be in balance* with their fishing opportunities.

Trends could be calculated for 2 fleet segments:

- All 2 segments displayed no clear trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 1 fleet segment in 2018.

- 1 segment with 1 stock-at-risk

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments				5

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	2		1	2

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

RoI was calculated for 3 segments:

- 1 segment was *in balance* with their fishing opportunities,
- 2 segments were *out of balance* with their fishing opportunities,

Trends were calculated for 3 segments:

- 1 segment displayed an increasing trend,
- 2 segments displayed a decreasing trend.

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

CR/BER was calculated for 3 segments:

- 1 segment was *in balance* with their fishing opportunities,
- 2 segments were *out of balance* with their fishing opportunities.

Trends were calculated for the 3 segments:

- 1 segment displayed an increasing trend,
- 1 segment displayed a decreasing trend,
- 1 segment displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The data required to calculate VUR (i.e., maximum days-at-sea) were not provided by the MS and thus, VUR_{220} is analysed here.

VUR_{220} was calculated for 3 segments:

- All 3 segments were *out of balance* with their fishing opportunities,

Trends were calculated for the 3 segments:

- All 3 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, 4 vessel length groups had inactive vessels (VL0010, VL1012, VL1218 and VL2440).

The total inactive fleet accounted for 28.4% of the total number of vessels, 4.8% of the total GT and 14.2% of the total kW. At the national level, inactive vessels accounted for more than 20% of the number of vessels but less than 20% for the other 2 categories (GT and kW).

By length group:

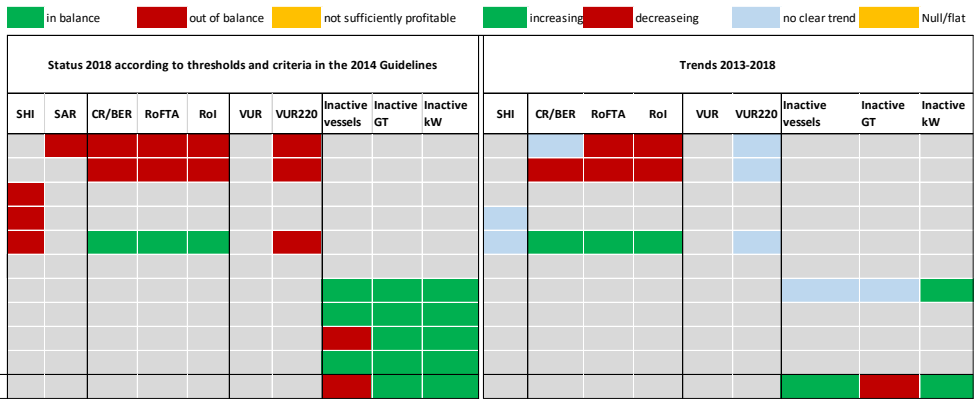
- 3 segments were *in balance* in terms of number of vessels,
- 1 segment was *out of balance* in terms of number of vessels,
- 4 segments were *in balance* in terms of GT,
- 4 segments were in balance in terms of kW.

Trends were available for only one segment (VL1218); increasing trend for kW and no clear trend for the number of vessels and GT.

Synthesis of indicators and trends

Based on indicator values for 2018 and trends over 2013-2018 and according to the criteria in the Commission guidelines, the majority of fleet segments appear to be out of balance with fishing opportunities. Especially indications of imbalance show segments PG VL0010 and PG VL1012 for which all indicators values are negative and economic indicators show a decreasing trend. The biological indicators suggest that the TM VL 1218, TM VL 1824 and TM VL 2440 segments may also be out of balance, although TM VL 2440 segment shows good economic performance and increasing trend in CR/BER ROI.

These observations are not in line with the assessment of balance in the Member States' fleet report submitted in 2020. No Action plan is proposed for the unbalanced segments.



SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
NAO	PG	VL0010	EST NAO PG 0010 NGI	1,150																			
NAO	PG	VL1012	EST NAO PG 1012 NGI	49																			
NAO	TM	VL1218	EST NAO TM 2440 NGI*	1																			
NAO	TM	VL1824	EST NAO TM 2440 NGI*	6																			
NAO	TM	VL2440	EST NAO TM 2440 NGI*	19																			
NAO	DTS	VL40XX	EST NAO DTS40XX IWE	5																			
NAO	INACTIVE	VL1218	EST NAO INA1218 NGI	4																			
NAO	INACTIVE	VL2440	EST NAO INA2440 NGI	1																			
NAO	INACTIVE	VL0010	EST NAO INA0010 NGI	463																			
NAO	INACTIVE	VL1012	EST NAO INA1012 NGI	20																			
EST Total				1,718																			

Comparison of indicator values

A comparison Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

In the MS annual fleet report the SHI has been provided for the time period 2014-2018 for all fleet segments except VL40XX due to the lack of data under STECF JRC. Discrepancy has been observed in the 2018 values of SHI between the MS annual fleet report (based on the STECF 19-13 Balance Indicators Table) and those estimated in the framework of the EWG 20-11. The differences are to be expected due to differences in input data (EWG 19-13 has used preliminary data for 2018).

In the absence of trend of SHI in the framework of EWG 20-11 a comparison between trends is not possible.

Stocks at Risk Indicator (SAR)

In the MS annual fleet report one segment (PG VL0010) has been considered as out of balance in the period 2016-2018. For the other segments no values for SAR or trends are provided.

The comparison between SAR reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 reveals the same output for segment PG VL0010.

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

In the MS annual fleet report the data for CR/BER is presented in chart for the period 2014-2018 and therefore, a comparison between the exact values reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 cannot be made.

The comparison between CR/BER trends presented in chart in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed different outputs for one of two segments (PG VL 1012). Possible reason for this could be the different input data used for the calculation (EWG 19-13 has used preliminary data for 2018).

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

A discrepancy has been observed in the calculation of ROI between the MS annual fleet report and the ones estimated in the framework of the EWG 20-11. For the fleet segments PG VL0010 and PG VL 1012 the status in the EWG 20-11 estimation was "out of balance" and for which the MS annual report indicated "in balance". Possible reasons for these discrepancies could be:

- different input data used for the calculation of ROI (EWG 19-13 has used preliminary data for 2018);

- different data of the 5-year average low risk long term interest rate (MS used 5-year average low risk long term interest rate of LTU and LVA and EWG 20-11- 5-year average low risk long term interest rate of Estonia).

The comparison between ROI trends in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed different outputs for two of three segments (PG VL0010 and PG VL 1012). EWG 20-11 noted that this due to the discrepancies in the segment's status observed.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

A different approach has been observed for the calculation of VUR between the MS annual fleet report and the ones estimated in the framework of the EWG 20-11.

In the MS annual fleet report the VUR Indicator was presented in chart as ratio between days at sea and maximum days at sea per fleet segment for the period 2015-2019.

EWG 20-11 reported VUR220 because the data presented by the MS under DCF did not provide information on the maximum observed days at sea per fleet segment and the theoretical maximum number of 220 days was used for the calculation.

Comparison between VUR values for 2019 cannot be made due to the inconsistency of the input data.

In the absence of trend of VUR/VUR220 in the framework of EWG 20-11 a comparison between trends is not possible.

Inactive Fleet Indicator

The information on the number of inactive vessels in 2019 has been provided in the MS annual fleet report for fishing vessels in length classes VL1218-VL2440 only. Estonia considers as not reasonable the calculation of the proportion of inactive vessels in the coastal fleet segments PG VL0010 and PG VL1012 due to the dependency of this type of fisheries on the season, directed species and fishing gear used.

EWG 20-11 notes that a comparison for Inactive Fleet Indicator in 2019 could only be made in terms of the number of inactive vessels in fleet segment VL1218 but not on the proportion of the inactive vessels from the total fleet.

Assessment of fleet report

The fleet report submitted by Estonia seems to provide a sound and comprehensive analysis of the balance between fleet capacity and fishing opportunity of all fleet segments. The report is in line with Commission guidelines except that the biological indicators (SHI and SAR) are not provided for the high seas fleet segment VL40XX due

to lack of data or confidentiality restrictions (low number of vessels in the segment) and the economic indicators for VL40XX are provided in a separate confidential document together with the economic indicators for VL1218.

The biological and economic indicator values used by the MS and presented in the fleet report are those computed by the 2019 EWG (STECF 19-13).
The Estonian fisheries management (based on individual transferrable quotas and individual transferrable efforts) is considered by the MS as an effective tool for keeping capacity in structural balance with fishing opportunities. No fleet segments were identified by the Member State as being out of balance and no action plan was provided. Although some of the coastal fleet segments show indications of imbalance, the reasons for not considering them as such are explained in the fleet report.

Measures in action plans

No new or revised action plans were proposed.

3.6.7 Finland (FIN)

Overview of indicator findings

Area 27
There were 12 fleet segments in the Finnish fleet in 2018, of which 8 were active. Of the 8 active segments, landings and economic data were provided aggregated in 5 fleet segments.

Sustainable Harvest Indicator (SHI)
Out of the 8 fleet segments active in 2018, SHI indicator values were available for 5. According to the criteria in the 2014 Commission 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.

The 3 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 74.8% of the total value of the landings in 2018 provided by MS, and were as follows:

- All 3 fleet segments may *not be in balance* with their fishing opportunities.

Trends were calculated for 3 segments:

- All 3 fleet segments displayed an increasing trend.

Stocks at Risk Indicator (SAR)
SAR indicator was available for 1 fleet segment in 2018.

- 1 segment with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments				5

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	1	1		3

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

RoI was calculated for 5 segments:

- 2 segments were *in balance* with their fishing opportunities,
- 3 segments were *out of balance* with their fishing opportunities

Trends could be calculated for 3 segments:

- All 3 segments displayed an increasing trend.

RoFTA was calculated for 5 segments:

- 2 segments were *in balance* with their fishing opportunities,
- 3 segments were *out of balance* with their fishing opportunities.

Trends were calculated for 5 segments:

- All 5 segments displayed an increasing trend.

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

CR/BER was calculated for 5 segments:

- 2 segments were *in balance* with their fishing opportunities.
- 3 segments were *out of balance* with their fishing opportunities.

Trends for the 5 segments were as follows:

- 3 segments displayed an increasing trend,
- 2 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The data required to calculate VUR (i.e., maximum days-at-sea) were provided by the MS and thus, VUR_{220} is not analyzed here.

VUR was calculated for 5 segments:

- 2 segments were *in balance* with their fishing opportunities,
- 3 segments were *out of balance* with their fishing opportunities.

Trends were calculated for 5 segments:

- All 5 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, 4 vessel length classes had inactive vessels (VL0010, VL1012, VL1218 and VL1824).

The total inactive fleet accounted for 59.2% of the total number of vessels, 30.4% of the total GT and 51.4% of the total kW. At the national level, inactive vessels accounted for more than 20% of the fleet in all 3 categories (#, GT and kW), and thus, *out of balance,* and displayed increasing trends.

By vessel length group:

- 3 segments were *in balance* in all 3 categories
- 1 segment (VL0010) was *out of balance* and displayed an increasing trend in all 3 categories.

Synthesis of indicators and trends

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
NAO	PG	VL0010	FIN NAO PG 0010 NGI	1,228																			
NAO	PG	VL1012	FIN NAO PG 1012 NGI*	39																			
NAO	PG	VL1218	FIN NAO PG 1012 NGI*	1																			
NAO	TM	VL1012	FIN NAO TM 1218 NGI*	10																			
NAO	TM	VL1218	FIN NAO TM 1218 NGI*	12																			
NAO	TM	VL1824	FIN NAO TM 1824 NGI	10																			
NAO	TM	VL40XX	FIN NAO TM 2440 NGI*	3																			
NAO	TM	VL2440	FIN NAO TM 2440 NGI*	17																			
NAO	INACTIVE	VL0010	FIN NAO INA0010 NGI	1,795																			
NAO	INACTIVE	VL1012	FIN NAO INA1012 NGI	110																			
NAO	INACTIVE	VL1218	FIN NAO INA1218 NGI	9																			
NAO	INACTIVE	VL1824	FIN NAO INA1824 NGI	1																			
FIN Total				3,235																			

Based on the biological STECF indicator estimations, three Finnish segments (NAO TM1218, NAO TM1824 and NAO TM2440) may be out of balance with their fishing opportunities, as the SHI-values are higher than 1 (with an increasing trend), indicating that they rely financially to a great extent on overfished stocks (F/Fmsy > 1). Also, the number of overharvested stocks (NOS) was 75-100% for all segments assessed. However, when considering the economic indicators, the situation may be interpreted differently. The economic indicators CR/BER, ROI ad RoFTA are all assessed as being in balance for the segments NAO TM1218 and NAO TM2440, whereas NAO TM1824 was assessed as being out of balance in all these indicators.

Accordingly, the segment NAO TM1824 may be considered as being out of balance with its fishing opportunities. Additionally, the segment NAO PG0010 may also be considered

as being out of balance with its fishing opportunities, because all indicators considered (SAR, CR/BER, ROI RoFTA, VUR, VUR220) indicate an imbalance.

In contrast to these findings, the MS states in its fleet report that the biological indicator (SHI) "does not provide an accurate enough picture of the status of these segments", that the financial indicators "do not justify the conclusion that the fleet is out of balance with fishing opportunities" and that the technical indicators need to be "interpreted with caution". The MS rather points to the fact that the Finnish fishing fleet has decreased continuously since Finland joined the European Union and has remained below the permitted limits, that Finland has not exceeded the quota since 1996 and mentions several arguments for the Finnish fleet being in balance with its fishing opportunities.

Comparison of indicator values

The balance between the fleet and resources was examined by referring to the indicators defined in the Commission´s guidelines COM(2014)545. The conclusion by the MS was that the Finnish fishing fleet and the fishing opportunities are in balance. However, this examination is rather descriptive and no segment-specific indicator values in support of their conclusions with respect to being in or out of balance were provided in the report. Hence comparisons with the values computed by the EWG cannot be made.

Sustainable Harvest Indicator (SHI)

In the Finnish annual fleet report the SHI-values have not been provided for the reference year 2018. However, the SHI-values for the different segments were discussed in the Finnish fleet report, although the reference year is not clear. Based on this fleet report, for three segments, the assessment about balance or in balance is not possible due to the low percentage (<40%) of the value of landings coming from biologically assessed fish stocks (F and F_{MSY} available). Two segments were found to be out of balance with their fishing opportunities. According to the STECF estimations, two segments cannot be assessed and three segments are assessed as being out of balance. Due to the lack of data, we are not able to explain the reason for this discrepancy. It is not clear from the fleet report which segments are being referred to as being in or out of balance.

No trend was presented for this indicator in the fleet report.

Stocks at Risk Indicator (SAR)

In the Finnish annual fleet report no SAR-values have been provided for the reference year 2018 or any other previous years.

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

In the Finnish annual fleet report no CR/BER-values have been provided for the reference year 2018 or any other previous years.

Consequently, no trend was presented for this indicator.

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

In the Finnish annual fleet report no ROI or FoFTA-values have been provided for the reference year 2018 or any other previous years.

Consequently, no trends were presented for these indicators.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

In the Finnish annual fleet report no VUR or VUR220-values have been provided for the reference year 2018 or any other previous years.

Consequently, no trends were presented for these indicators.

Inactive Fleet Indicator

Inactive vessels have not been reported in the Finnish fleet report.

Assessment of fleet report

The fleet report submitted by Finland provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments. The fleet report submitted by Finland is only partly in line with the Commission guidelines (COM(2014)545)because the conclusion by the MS on the balance between the Finnish fishing fleet and its fishing opportunities is mainly based on ongoing capacity reductions and compliance with quota regulations and not on the status and trends of the different balance indicators.

The current Finish management system is considered by the MS to be well functioning in order to secure a balance between fishing opportunities and capacity. Therefore, there is no action plan proposed.

The general conclusion of the Expert group is that the Finnish observations are only partly in line with the assessment of balance in the Member States' fleet report submitted in 2020, and that no action plan was proposed for unbalanced segments.

Measures in action plans

No new or revised action plans were proposed.

3.6.8 France (FRA)

Overview of indicator findings

There were 143 fleet segments in the French national fleet in 2018, of which 119 were active fleet segments. Indicator results are presented below by Supra-region.

Area 27

In the French North Atlantic fleet, there were 57 fleet segments in 2018, of which 52 were active. Of the 52 active segments, landings data were provided for 51 segments and economic data for 31 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 51 fleet segments active in 2017, SHI indicator values were available for 49.

SHI indicator values for 30 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 19 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 60.7% of the total value of the landings in 2018 provided by MS, and were as follows:

- 3 segments may be *in balance* with their fishing opportunities;
- 16 segments may be *out of balance* with their fishing opportunities.

Trends could be calculated for 17 fleet segments:

- 5 segments displayed a decreasing trend,
- 12 segments displayed no clear trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 16 fleet segments in 2018. For all 16 fleet segments, one or more stocks-at-risk were detected:

- 1 segment with 7 stocks-at-risk,
- 1 segment with 6 stocks-at-risk,
- 4 segments with 3 stocks-at-risk,
- 4 segments with 2 stocks-at-risk,
- 6 segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments		6	36	6

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/Fmsy is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	34	9	5	1

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

RoI was not calculated.

RoFTA was calculated for 31 segments:

- All 31 segments were *in balance* with their fishing opportunities.

Trends could be calculated for 29 segments:

- 17 segments displayed an increasing trend,
- 11 segments displayed a decreasing trend,
- 1 segment displayed no clear trend.

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

CR/BER was calculated for 31 segments:

- All 31 segments were *in balance* with their fishing opportunities.

Trends could be calculated for 29 segments:

- 14 segments displayed an increasing trend,
- 5 segments displayed a decreasing trend,
- 10 segments displayed no trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The data required to calculate VUR (i.e., maximum days-at-sea) were provided by the MS and thus, VUR_{220} is not analysed here.

VUR was calculated for 33 segments:

- 4 segments were *in balance* with their fishing opportunities,
- 29 segments were *out of balance* with their fishing opportunities,

No trends could be calculated.

The Inactive Fleet Indicators

In 2018, 5 vessel length classes had inactive vessels (VL0010, VL1012, VL1218 VL1824 and VL2440).

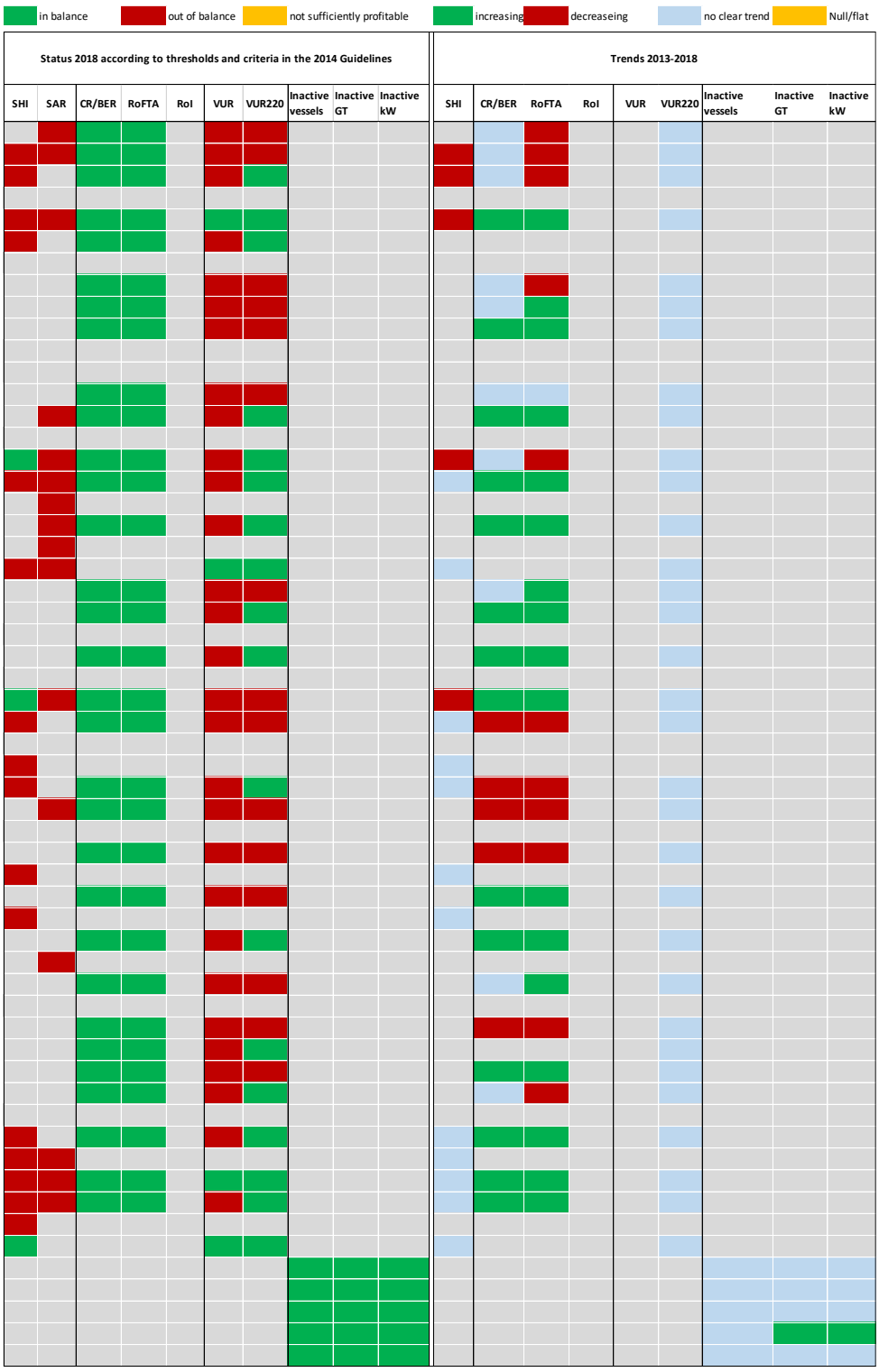
The French Area27 inactive fleet accounted for 3.2% of the total number of vessels, 1.3% of the total GT and 2.1% of the total kW. At the N Atlantic fleet level, inactive vessels accounted for less than 20% of the fleet in all 3 categories (#, GT and kW), and thus, were *in balance*.

By length group, all 5 segments were *in balance* (<20%) and all displayed no clear trend for vessel numbers (#).

Synthesis of indicators and trends (Area 27 NAO)

The status of fleet segments and trends for the French fleet in Area 27 is shown below.

An overview of status and trends for the French fleet in all regions is given below in the subsection headed "Status and trends for the French fleet in all regions".



SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
NAO	DFN	VL0010	FRA NAO DFN0010 NGI	281																			
NAO	DFN	VL1012	FRA NAO DFN1012 NGI	157																			
NAO	DFN	VL1218	FRA NAO DFN1218 NGI*	67																			
NAO	PGO	VL1218	FRA NAO DFN1218 NGI*	1																			
NAO	DFN	VL1824	FRA NAO DFN1824 NGI	28																			
NAO	DFN	VL2440	FRA NAO DFN2440 NGI*	20																			
NAO	PGP	VL2440	FRA NAO DFN2440 NGI*	1																			
NAO	DRB	VL0010	FRA NAO DRB0010 NGI	80																			
NAO	DRB	VL1012	FRA NAO DRB1012 NGI	89																			
NAO	DRB	VL1218	FRA NAO DRB1218 NGI*	94																			
NAO	DRB	VL1824	FRA NAO DRB1218 NGI*	8																			
NAO	DRB	VL2440	FRA NAO DRB1218 NGI*	1																			
NAO	DTS	VL0010	FRA NAO DTS0010 NGI	78																			
NAO	DTS	VL1012	FRA NAO DTS1012 NGI*	182																			
NAO	PS	VL1012	FRA NAO DTS1012 NGI*	3																			
NAO	DTS	VL1218	FRA NAO DTS1218 NGI	150																			
NAO	DTS	VL1824	FRA NAO DTS1824 NGI*	127																			
NAO	MGP	VL1824	FRA NAO DTS1824 NGI*	12																			
NAO	DTS	VL2440	FRA NAO DTS2440 NGI*	54																			
NAO	MGP	VL2440	FRA NAO DTS2440 NGI*	5																			
NAO	DTS	VL40XX	FRA NAO DTS40XX NGI	11																			
NAO	FPO	VL0010	FRA NAO FPO0010 NGI	297																			
NAO	FPO	VL1012	FRA NAO FPO1012 NGI	75																			
NAO	FPO	VL1218	FRA NAO FPO1824 NGI*	6																			
NAO	FPO	VL1824	FRA NAO FPO1824 NGI*	11																			
NAO	FPO	VL2440	FRA NAO FPO1824 NGI*	1																			
NAO	HOK	VL0010	FRA NAO HOK0010 NGI	230																			
NAO	HOK	VL1012	FRA NAO HOK1012 NGI	46																			
NAO	HOK	VL1218	FRA NAO HOK2440 NGI*	1																			
NAO	HOK	VL1824	FRA NAO HOK2440 NGI*	2																			
NAO	HOK	VL2440	FRA NAO HOK2440 NGI*	20																			
NAO	MGO	VL0010	FRA NAO MGO0010 NGI*	158																			
NAO	MGO	VL1012	FRA NAO MGO0010 NGI*	7																			
NAO	MGP	VL0010	FRA NAO MGP0010 NGI*	9																			
NAO	TM	VL0010	FRA NAO MGP0010 NGI*	1																			
NAO	MGP	VL1012	FRA NAO MGP1012 NGI*	34																			
NAO	TM	VL1012	FRA NAO MGP1012 NGI*	7																			
NAO	MGP	VL1218	FRA NAO MGP1218 NGI*	19																			
NAO	TBB	VL1218	FRA NAO MGP1218 NGI*	3																			
NAO	PGO	VL0010	FRA NAO PGO0010 NGI*	98																			
NAO	PGO	VL1012	FRA NAO PGO0010 NGI*	4																			
NAO	PGP	VL0010	FRA NAO PGP0010 NGI	61																			
NAO	PGP	VL1012	FRA NAO PGP1012 NGI	9																			
NAO	PMP	VL0010	FRA NAO PMP0010 NGI	43																			
NAO	PMP	VL1012	FRA NAO PMP1012 NGI*	35																			
NAO	PMP	VL1218	FRA NAO PMP1012 NGI*	3																			
NAO	PS	VL1218	FRA NAO PS 1218 NGI*	26																			
NAO	PS	VL1824	FRA NAO PS 1218 NGI*	2																			
NAO	TM	VL1218	FRA NAO TM 1218 NGI	9																			
NAO	TM	VL1824	FRA NAO TM 1824 NGI*	18																			
NAO	TM	VL2440	FRA NAO TM 1824 NGI*	2																			
NAO	TM	VL40XX	FRA NAO TM 40XX NGI	4																			
NAO	INACTIVE	VL0010	FRA NAO INA0010 NGI	166																			
NAO	INACTIVE	VL1012	FRA NAO INA1012 NGI	30																			
NAO	INACTIVE	VL1218	FRA NAO INA1218 NGI	9																			
NAO	INACTIVE	VL1824	FRA NAO INA1824 NGI	8																			
NAO	INACTIVE	VL2440	FRA NAO INA2440 NGI	2																			

Area 37

There were 34 fleet segments in the French Mediterranean fleet in 2018, of which 28 were active. Of the 28 active segments, landings data were available for 28 segments and economic data for 17 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 28 fleet segments active in 2018, SHI indicator values were available for 20.

According to the criteria in the 2014 Commission guidelines, the SHI indicator values for all 20 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 12 fleet segments in 2018. For all 12 fleet segments in 2018, one or more stock at risk were detected:

- 1 segment with 2 stocks-at-risk,
- 11 segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below

	0-25%	25-50%	50-75%	75-100%
N of fleet segments				20

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	19	1		

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

RoI was not calculated.

RoFTA was calculated for 17 segments:

- 16 segments were *in balance* with their fishing opportunities,
- 1 segment was *out of balance* with their fishing opportunities.

Trends were calculated for the 17 segments:

- 16 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend.

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

CR/BER was calculated for 17 segments:

- 16 segments were *in balance* with their fishing opportunities,

- 1 segment was *out of balance* with their fishing opportunities.

Trends for the 17 segments were as follows:

- 13 segments displayed an increasing trend,
- 4 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

VUR could be calculated for 5 segments:

- All 5 segments were *out of balance* with their fishing opportunities,

No trend could be calculated.

VUR_{220} was calculated for 17 segments:

- 4 segments were *in balance* with their fishing opportunities,
- 13 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 16 segments:

- 3 segments displayed a decreasing trend,
- 13 segments displayed no clear trend.

The Inactive Fleet Indicators (MBS)

In 2018, 6 vessel length classes in the MBS fleet had inactive vessels.

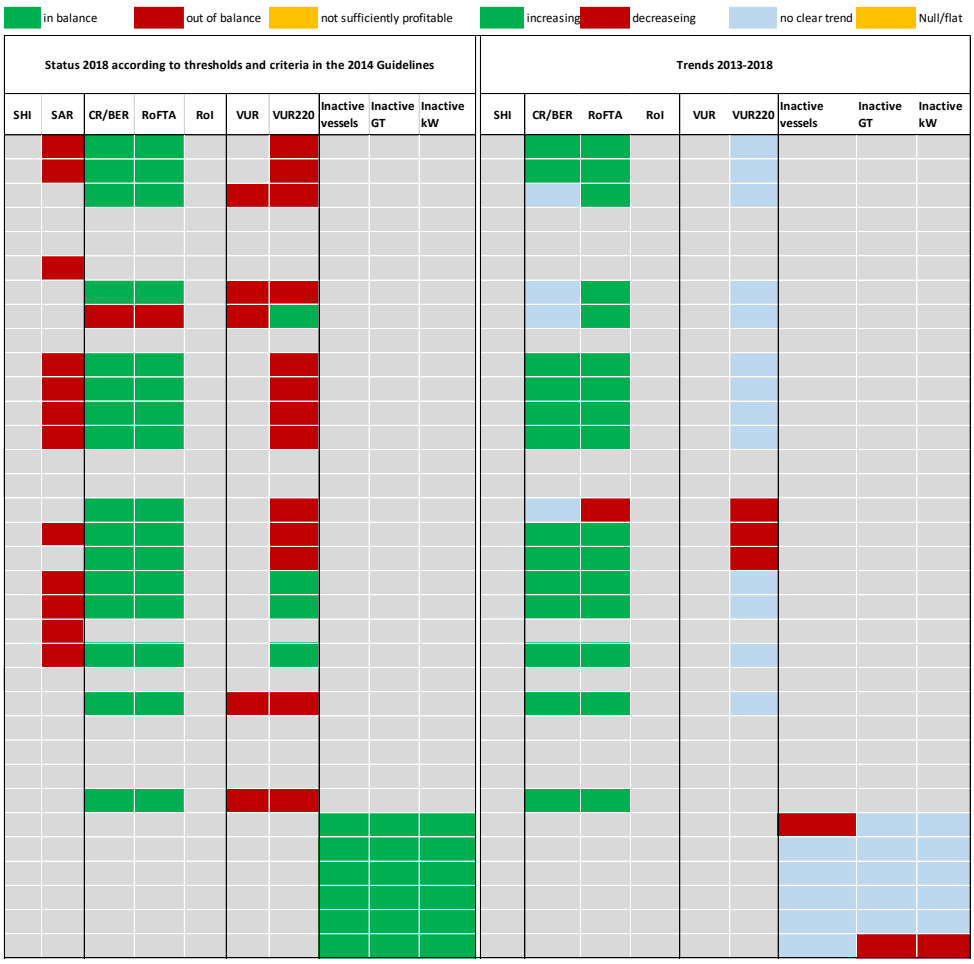
The total inactive fleet accounted for 3.1% of the total number of vessels, 0.7% of the total GT and 1.6% of the total kW. At the Mediterranean fleet level, inactive vessels accounted for less than 20% of the fleet in all 3 categories (#, GT and kW), and thus, were *in balance*.

By length group, all 6 segments were *in balance* (<20%) and all displayed no clear trend for vessel numbers (#), apart from the VL0006 segment, which displayed a decreasing trend for vessel numbers.

Synthesis of indicators and trends (Area 37, MBS)

The status of fleet segments and trends for the French fleet in Area 37 is shown below.

An overview of status and trends for the French fleet in all regions is given below in the subsection headed “Status and trends for the French fleet in all regions”.



SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
MBS	DFN	VL0006	FRA MBS DFN0006 NGI	122																			
MBS	DFN	VL0612	FRA MBS DFN0612 NGI	521																			
MBS	DFN	VL1218	FRA MBS DFN1218 NGI*	8																			
MBS	FPO	VL1218	FRA MBS DFN1218 NGI*	1																			
MBS	HOK	VL1218	FRA MBS DFN1218 NGI*	8																			
MBS	DTS	VL1218	FRA MBS DTS1824 NGI*	3																			
MBS	DTS	VL1824	FRA MBS DTS1824 NGI*	28																			
MBS	DTS	VL2440	FRA MBS DTS2440 NGI*	31																			
MBS	TM	VL2440	FRA MBS DTS2440 NGI*	1																			
MBS	FPO	VL0006	FRA MBS FPO0006 NGI	80																			
MBS	FPO	VL0612	FRA MBS FPO0612 NGI	63																			
MBS	HOK	VL0006	FRA MBS HOK0006 NGI	16																			
MBS	HOK	VL0612	FRA MBS HOK0612 NGI	64																			
MBS	DRB	VL0612	FRA MBS MGO0612 NGI*	6																			
MBS	MGO	VL0006	FRA MBS MGO0612 NGI*	1																			
MBS	MGO	VL0612	FRA MBS MGO0612 NGI*	10																			
MBS	PGO	VL0006	FRA MBS PGO0006 NGI	40																			
MBS	PGO	VL0612	FRA MBS PGO0612 NGI	49																			
MBS	PGP	VL0006	FRA MBS PGP0006 NGI	49																			
MBS	PGP	VL0612	FRA MBS PGP0612 NGI	101																			
MBS	PMP	VL0006	FRA MBS PMP0612 NGI*	1																			
MBS	PMP	VL0612	FRA MBS PMP0612 NGI*	7																			
MBS	PMP	VL1218	FRA MBS PS 0612 NGI*	1																			
MBS	PS	VL0612	FRA MBS PS 0612 NGI*	11																			
MBS	PS	VL1218	FRA MBS PS 0612 NGI*	4																			
MBS	PS	VL1824	FRA MBS PS 0612 NGI*	4																			
MBS	PS	VL40XX	FRA MBS PS 2440 NGI*	6																			
MBS	PS	VL2440	FRA MBS PS 2440 NGI*	14																			
MBS	INACTIVE	VL0006	FRA MBS INA0006 NGI	56																			
MBS	INACTIVE	VL0612	FRA MBS INA0612 NGI	135																			
MBS	INACTIVE	VL1218	FRA MBS INA1218 NGI	4																			
MBS	INACTIVE	VL1824	FRA MBS INA1824 NGI	3																			
MBS	INACTIVE	VL2440	FRA MBS INA2440 NGI	3																			
MBS	INACTIVE	VL40XX	FRA MBS INA40XX NGI	1																			

OFR

There were 52 fleet segments in the French OFR fleet in 2018, of which 39 were active. Of the 39 active segments, landings data were available for 33 segments and economic data for 10 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 39 fleet segments active in 2018, SHI indicator values were available for 23.

According to the criteria in the 2014 Commission guidelines, the SHI indicator values for 16 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 7 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 80.53% of the total value of the landings in 2018 provided by MS, and were as follows:

- 6 segments may be *in balance* with their fishing opportunities;
- 1 segment may be *out of balance* with their fishing opportunities.

No trends were available for the 7 fleet segments.

Stocks at Risk Indicator (SAR)

For 1 fleet segment in 2018, one stock-at-risk was detected.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below

	0-25%	25-50%	50-75%	75-100%
N of fleet segments		19	1	2

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/Fmsy is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	20	3		

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

RoFTA was calculated for 10 segments:

- 6 segments were *in balance* with their fishing opportunities,
- 4 segments were *out of balance* with their fishing opportunities.

No trends could be calculated for all 10 segments.

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

CR/BER was calculated for 10 segments:

- 6 segments were *in balance* with their fishing opportunities,
- 4 segments were *out of balance* with their fishing opportunities.

No trends could be calculated for all 10 segments.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

Note: VUR_{220} is calculated on a standard year of 220 fishing days and is available in every case. VUR is calculated using the maximum days at sea provided by the Member State (where available).

VUR was calculated for 7 segments:

- 3 segments were *in balance* with their fishing opportunities,
- 4 segments were *out of balance* with their fishing opportunities,

No trends could be calculated for all segments.

VUR_{220} was calculated for 22 segments:

- 4 segments were *in balance* with their fishing opportunities,
- 18 segments were *out of balance* with their fishing opportunities.

No trends could be calculated for all segments.

The Inactive Fleet Indicators

In 2018, 13 vessel length classes in the outermost region fleets had inactive vessels.

The total inactive fleet accounted for 9.7% of the total number of vessels, 1.5% of the total GT and 7.9% of the total kW. At the OMR fleet level, inactive vessels accounted for less than 20% of the fleet in all 3 categories (#, GT and kW), and thus, were *in balance*.

By length group, all 13 segments were *in balance* (<20%) in all 3 categories (#, GT and kW). No trends could be calculated.

Synthesis of indicators and trends (Other fishing regions; OFR)

The status of fleet segments and trends for the French fleet in Other Fishing Regions is shown below.

An overview of status and trends for the French fleet in all regions is given below in the subsection headed "Status and trends for the French fleet in all regions".

					in balance	out of balance	not sufficiently profitable							increasing	decreaseing		no clear trend	Null/flat			
					Status 2018 according to thresholds and criteria in the 2014 Guidelines									Trends 2013-2018							
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
OFR	DFN	VL0010	FRA OFR DFN0010 GF	48																			
OFR	DFN	VL0010	FRA OFR DFN0010 GP	81																			
OFR	DFN	VL0010	FRA OFR DFN0010 MQ	71																			
OFR	DTS	VL1824	FRA OFR DTS1824 GF	13																			
OFR	FPO	VL0010	FRA OFR FPO0010 GP	93																			
OFR	FPO	VL0010	FRA OFR FPO0010 MQ	165																			
OFR	HOK	VL0010	FRA OFR HOK0010 GP	83																			
OFR	HOK	VL0010	FRA OFR HOK0010 MQ	134																			
OFR	HOK	VL0010	FRA OFR HOK0010 YT	104																			
OFR	HOK	VL1218	FRA OFR HOK1218 RE	16																			
OFR	HOK	VL1824	FRA OFR HOK1824 RE *	3																			
OFR	HOK	VL2440	FRA OFR HOK1824 RE *	1																			
OFR	PGO	VL0010	FRA OFR PGO0010 MQ	41																			
OFR	PS	VL0010	FRA OFR PS 0010 GP	16																			
OFR	PS	VL40XX	FRA OFR PS 40XX IWE	22																			
OFR	DFN	VL0010	FRA OFR DFN0010 YT *	6																			
OFR	PGP	VL0010	FRA OFR DFN0010 YT *	4																			
OFR	DFN	VL1012	FRA OFR DFN1012 GF *	57																			
OFR	FPO	VL0010	FRA OFR DFN1012 GF *	1																			
OFR	HOK	VL1012	FRA OFR DFN1012 GF *	1																			
OFR	HOK	VL0010	FRA OFR HOK0010 RE *	156																			
OFR	HOK	VL1012	FRA OFR HOK0010 RE *	6																			
OFR	FPO	VL1218	FRA OFR HOK1012 MQ *	2																			
OFR	FPO	VL1824	FRA OFR HOK1012 MQ *	1																			
OFR	HOK	VL1012	FRA OFR HOK1012 MQ *	9																			
OFR	HOK	VL1218	FRA OFR HOK1012 MQ *	1																			
OFR	PGO	VL0010	FRA OFR PGP0010 GP *	7																			
OFR	PGP	VL0010	FRA OFR PGP0010 GP *	230																			
OFR	FPO	VL0010	FRA OFR PGP0010 MF *	1																			
OFR	PGP	VL0010	FRA OFR PGP0010 MF *	4																			
OFR	HOK	VL0010	FRA OFR PGP0010 MF *	3																			
OFR	PGP	VL0010	FRA OFR PGP0010 MQ *	214																			
OFR	PS	VL0010	FRA OFR PGP0010 MQ *	1																			
OFR	PGO	VL0010	FRA OFR PGP0010 RE *	4																			
OFR	PGP	VL0010	FRA OFR PGP0010 RE *	10																			
OFR	DFN	VL1012	FRA OFR PGP1012 GP *	6																			
OFR	FPO	VL1012	FRA OFR PGP1012 GP *	2																			
OFR	PGP	VL1012	FRA OFR PGP1012 GP *	4																			
OFR	HOK	VL1012	FRA OFR PGP1012 GP *	9																			
OFR	INACTIVE	VL0010	FRA OFR INA0010 GF	14																			
OFR	INACTIVE	VL0010	FRA OFR INA0010 GP	204																			
OFR	INACTIVE	VL0010	FRA OFR INA0010 MF	5																			
OFR	INACTIVE	VL0010	FRA OFR INA0010 MQ	312																			
OFR	INACTIVE	VL0010	FRA OFR INA0010 RE	33																			
OFR	INACTIVE	VL0010	FRA OFR INA0010 YT	29																			
OFR	INACTIVE	VL1012	FRA OFR INA1012 GF	12																			
OFR	INACTIVE	VL1012	FRA OFR INA1012 GP	12																			
OFR	INACTIVE	VL1012	FRA OFR INA1012 MQ	7																			
OFR	INACTIVE	VL1824	FRA OFR INA1824 GF	7																			
OFR	INACTIVE	VL1824	FRA OFR INA1824 MQ	2																			
OFR	INACTIVE	VL1824	FRA OFR INA1824 RE	3																			
OFR	INACTIVE	VL1012	FRA OFR INA1012 RE	2																			
FRA Total				6,629																			

Status and trends for the Spanish fleet in ALL REGIONS

Based on the indicator values for 2018 and trends over 2014-2018 and according to the criteria in the Commission guidelines, for the majority of fleet segments the technical indicators show imbalance, whereas the biological indicators weren't estimated for all observed segments. While the economic indicators characterize a profitable fishery, no clear trend was observed.

These observations are not in line with the assessment of balance in the Member States' fleet report submitted in 2020 where the fleet segmentation applied for the estimates

differs from that used by the Expert group. Furthermore, the assessment in the fleet report is based only on the values for the biological indicators.

According to the information provided in the estimates for EWG20-11, the financial indicators CR/BER and RoFTA indicate that most of the French fleet segments appear to be in balance with their fishing opportunities in Areas 27 and 37, with often increasing trends. The estimates provided for economic indicators (ROI and/or RoFTA, CR/BER) show the profitable fishery for all 31 calculated segments. The 29 imbalanced segments were detected for technical indicator (VUR) estimated based on maximum days-at-sea. However, the biological indicator SHI puts this positive assessment into perspective. For the 26 segments, where the SHI-values are meaningful, 9 appear to be in balance against 17 that appear not to be in balance with their fishing opportunities. Of these 26 segments, trends could be calculated for 17 fleet segments (in FAO Area 27 only). Of these 17 segments, 5 displayed a decreasing trend (which is positive) and for 12 segments no clear trend was observed.

Comparison of indicator values

The French fleet report list a fleet segmentation that is entirely different to that used by the Expert group. For this reason, there is no possibility to compare indicator values for equivalent fleet segments.

Assessment of fleet report

The indicator values submitted by France are based on data for the year 2018 and appear to have been computed in line with the Commission guidelines COM(2014)545. However, no segment-specific indicator values in support of their conclusions with respect to in or out of balance were provided in the report. Hence comparisons with the values computed by the EWG cannot be made.

The Member States' assessment of balance seems to be based on biological indicators (SHI, SAR, NOS) and the EDI. Other economic and technical indicators were not taken into account for the reasons outline in the fleet report.

The EWG 20-21 notes that the general information in the Fleet Report represents significant reduction in number of segments from 232 to 194 considered for the period 2011-2018. The change in the number of segments could be caused by the different reasons related or not related to the fleet volume and capacity reduction. The reason for the change in the number of segments in French fleet is unknown.

According to information provided in the MS Fleet Report, out of a total of 194 fleet segments, 7 were assessed to be out of balance, 102 were in balance, 71 segments could not be assessed (56 due to a paucity of relevant data and information or which comprised less than three vessels and 15 which require further monitoring) and 14 were inactive segments. An action plan is provided.

The Action plan was submitted in the Annex 4 of the Fleet report and includes 6 segments from 7 detected imbalanced for 2018. A complete and detailed description about previous action plan implementation was provided per segment and action in Annex 3 to the fleet report.

The segments were considered imbalanced by the MS due to the two following reasons:

- the SAR indicator or 'SHI' indicator is negative (greater than 1) over at least the last three years assessed in the report for 2020, i.e. 2016 to 2018;

- segments fishing overharvested stock for at least the last three years assessed in the report for 2020 (i.e. 2016 to 2018) and where the economic dependence on these overharvested stocks is greater than 40%.

According to the information provided in the Fleet Report values for all indicators specified in the 2014 guidelines were calculated although the MS considers that the economic and technical indicators are not relevant for their assessment of balance. The MS's assessment of balance is based on the biological indicators (SHI, SAR, NOS) and the EDI but the segment-specific indicator values are not provided in the fleet report.

However, not all fleet segments were assessed by France as some of the segments require additional information to be collected before an assessment can be made, some segments were not assessed for confidentiality reasons, or there is a need for further monitoring. The proportion of the fleet that was not assessed is not quantified in the Fleet Report.

Measures in action plans

The plans to restore a sustainable balance between fishing capacity and fishing opportunities in imbalanced segments will each primarily comprise the following actions:

- Maintenance of the current authorisation system, which prohibits any increase in vessel capacity or sale of vessels, failing which fishing licences are permanently withdrawn.
- Implementation of assisted management measures intended to reduce fishing effort in imbalanced segments.
- Optimising the regulatory, technical and administrative measures as frozen of licence for eel and glass eel in Atlantic; temporary closures envisage under GFCM; seasonal ban in the Gulf of Lion in order to protect juvenile hake in particular; conversion of vessels to methods other than 'gangui' (pair trawl) fishing.
- Creasing selectivity of fishing gear, where appropriate by funding research to rebalance the stock(s) concerned more quickly.
- Steering the renewal and redeployment of the fleet towards balanced segments, with assistance for temporary cessation of activity where appropriate.

The fishing capacity reduction targets are planned for the 2021. The effort reduction measures planned for 2022-2024.

The EWG 20-11 notes that the French Action Plan identifies six fleet segments from seven considered out of balance in 2018 and presents a wide range of general measures for all fleets and specific measures for those fleet segments identified as being out of balance with fishing opportunities. The 12-18 m purse seine segment VL1218 operating in Atlantic – Celtic Sea and West of Scotland which was assessed to be out of balance was not included in the Action Plan, but the reasons for omitting it are not clear. The objectives, tools and timeframes are all well described in relation to the specific and general measures identified in the Action Plan for the six imbalanced segments. The MS

also continiue to implement some measures implemented in action plans following the 2016 and 2018 Fleet Reports.

3.6.9 Germany (DEU)

Overview of indicator findings

Area 27

There were 27 fleet segments in 2018, of which 22 were active. Of the 22 active segments, landings data were provided for 14 fleet segments and economic data for 13 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 22 fleet segments active in 2018, SHI indicator values were available for 13.

According to the criteria in the 2014 Commission 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 8 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 48.62% of the total value of the landings in 2018 provided by MS, and were as follows:

- 1 fleet segment may be *in balance* with their fishing opportunities;
- 7 fleet segments may be *out of balance* with their fishing opportunities.

Trends were available for the 8 fleet segments:

- 4 fleet segments displayed a decreasing trend,
- 4 fleet segments displayed no clear trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 11 fleet segments in 2018. For all 11 fleet segments, one or more stocks-at-risk were detected:

- 2 fleet segments with 3 stocks-at-risk,
- 2 fleet segments with 2 stocks-at-risk,
- 7 fleet segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments			5	8

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	4	4	2	3

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

RoI was not calculated.

RoFTA was calculated for 13 segments:

- 9 segments were *in balance* with their fishing opportunities,
- 4 segments were *out of balance* with their fishing opportunities.

Trends were calculated for 13 segments:

- 10 segments displayed an increasing trend,
- 3 segments displayed a decreasing trend.

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

CR/BER was calculated for 13 segments:

- 9 segments were *in balance* with their fishing opportunities,
- 4 segments were *out of balance* with their fishing opportunities.

Trends were calculated for 13 segments:

- 8 segments displayed an increasing trend,
- 3 segments displayed a decreasing trend,
- 2 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The data required to calculate VUR (i.e., maximum days-at-sea) were provided by the MS and thus, VUR_{220} is not analysed here.

VUR was calculated for 13 segments:

- 10 segments were *in balance* with their fishing opportunities,
- 3 segments were *out of balance* with their fishing opportunities.

Trends for the 13 segments were as follows:

- All 13 segments displayed no clear trends.

The Inactive Fleet Indicators

In 2018, 5 vessel length segments had inactive vessels (VL0010, VL1012, VL1218, VL1824 and VL2440).

The German inactive fleet accounted for 27.9% of the total number of vessels, 2.7% of the total GT and 7.8% of the total kW. At the national level, inactive vessels accounted for more than 20% of the fleet in vessel number and thus, was *out of balance*, and displayed an increasing trend.

The segment with the highest level of inactivity is the VL0010 segment at 25.6% in terms of number of vessels and 4.4% in kW.

By vessel length group:

- 1 segment was *out of balance* in terms of vessel numbers, and displayed an increasing trend,
- All segments were *in balance* in terms of GT and kW.

Synthesis of indicators and trends

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
NAO	DFN	VL1218	DEU NAO DFN1218 NGI	5																			
NAO	DFN	VL2440	DEU NAO DFN2440 NGI*	5																			
NAO	FPO	VL1218	DEU NAO DFN2440 NGI*	1																			
NAO	FPO	VL2440	DEU NAO DFN2440 NGI*	1																			
NAO	DTS	VL0010	DEU NAO DTS1012 NGI*	1																			
NAO	DTS	VL1012	DEU NAO DTS1012 NGI*	8																			
NAO	DTS	VL1218	DEU NAO DTS1218 NGI	16																			
NAO	DTS	VL1824	DEU NAO DTS1824 NGI	10																			
NAO	DTS	VL2440	DEU NAO DTS2440 NGI	10																			
NAO	DTS	VL40XX	DEU NAO DTS40XX NGI	7																			
NAO	PG	VL0010	DEU NAO PG 0010 NGI	657																			
NAO	PG	VL1012	DEU NAO PG 1012 NGI	51																			
NAO	TBB	VL0010	DEU NAO TBB1012 NGI*	7																			
NAO	TBB	VL1012	DEU NAO TBB1012 NGI*	5																			
NAO	TBB	VL1218	DEU NAO TBB1218 NGI	109																			
NAO	TBB	VL1824	DEU NAO TBB1824 NGI	69																			
NAO	TBB	VL40XX	DEU NAO TBB2440 NGI*	1																			
NAO	TBB	VL2440	DEU NAO TBB2440 NGI*	8																			
NAO	TM	VL1218	DEU NAO TM 40XX NGI*	1																			
NAO	TM	VL40XX	DEU NAO TM 40XX NGI*	5																			
NAO	TM	VL1824	DEU NAO TM 40XX NGI*	3																			
NAO	TM	VL2440	DEU NAO TM 40XX NGI*	2																			
NAO	INACTIVE	VL0010	DEU NAO INA0010 NGI	349																			
NAO	INACTIVE	VL1012	DEU NAO INA1012 NGI	16																			
NAO	INACTIVE	VL1218	DEU NAO INA1218 NGI	10																			
NAO	INACTIVE	VL1824	DEU NAO INA1824 NGI	4																			
NAO	INACTIVE	VL2440	DEU NAO INA2440 NGI	1																			
DEU Total				1,362																			

Based on biological indicator values (SHI and SAR) for 2018 and trends over the period 2014 to 2018 and in accordance with the criteria in the Commission guidelines, almost all fleet segments appear to be out of balance with fishing opportunities and where trends in SHI can be computed, such trends are all indicating an improving situation.

For most fleet segments the economic indicators are indicating "in balance" and the trend is improving (increasing trend).

Three segments were out of balance according to the technical indicator (VUR), and eight based on VUR220). All biological, economic and technical indicators are out of balance for the PG 0010 NGI and PG 1012 NGI fleet segments.

These observations are largely in line with the assessments on balance in the fleet report and an action plan was proposed by the Member State for unbalanced segments.

Comparison of indicator values

A comparison Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

In the MS annual fleet report, the SHI has been provided for the reference year 2018. The comparison between SHI reports in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values with the exception of one discrepancy for DEU NAO TM 40XX NGI* segment. The status in the EWG 20-11 estimation was "in balance" for which the MS annual report indicated as "out of balance".

Indicator trends were not provided in the fleet report. No comparison was possible.

Stocks at Risk Indicator (SAR)

In the MS annual fleet report the SAR has been provided for the reference year 2018.

The comparison between SHI reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values with the exception of one discrepancy for the DEU NAO TBB2440 NGI* segment. The status in the EWG 20-11 estimation was "out of balance" for which the MS annual report indicated "in balance".

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

The comparisons between CR/BER reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values with the exception of discrepancies for three segments. The status in the EWG 20-11 estimation was "out of balance" for DEU NAO DFN1218 NGI and DEU NAO DTS40XX NGI DEU segments as for DEU NAO DFN1218 was "in balance", whereas the MS annual report indicated "in balance" and "out of balance" respectively.

Indicator trends were not provided in the fleet report. No comparison was possible.

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

The comparison between ROI reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values with exception of discrepancies for three segments. The status in the EWG 20-11 estimation was "out of balance" for DEU NAO DFN1218 NGI and DEU NAO DTS40XX NGI DEU segments as for DEU NAO DFN1218 was "in balance", whereas the MS annual report indicated "in balance" and "out of balance" respectively.

Indicator trends were not provided in the fleet report. No comparison was possible.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

In the MS annual fleet report, the VUR Indicator was calculated as the ratio between days at sea and maximum days at sea for each length group and gear type. Some explanation on technical indicator calculations was included in the MS annual fleet report.

EWG 20-11 reported both calculations based on the maximum observed days at sea per fleet segment and the theoretical maximum number of days.

A discrepancy has been observed in the calculation of VUR between the MS annual fleet report and that of the estimation in the framework of the EWG 20-11. The status in the EWG 20-11 estimation was "in balance" for DEU NAO DFN1218 NGI, DEU NAO DTS1218 NGI, DEU NAO DTS1824 NGI, DEU NAO DTS2440 NGI segments for which the MS annual report indicated "out of balance"

Indicator trends were not provided in the fleet report. No comparison was possible.

Inactive Fleet Indicator

Inactive vessels are omitted in the MS report, but this information is stated in the EWG 20-11 dataset, as Germany submitted the data in the DCF.

Indicator trends were not provided in the fleet report. No comparison was possible.

Assessment of fleet report

The fleet report submitted by Germany provides sound and comprehensive analysis of the balance between fleet capacity and fishing opportunities for all fleet segments.

The fleet report submitted by Germany is mostly in line with the Commission guidelines COM(2014)545. The inactive vessel indicator was missing.

Measures in action plans

The current Germany management system is not considered by the MS to be well functioning in order to secure a balance between fishing opportunities and capacity. Therefore, there are action plans proposed. The German Action Plan identifies 12 imbalanced fleet segments and presents a wide range measures both general for all fleets and specific to those fleet segments identified as being out of balance with fishing opportunities and also to those fisheries where problems have been otherwise identified.

However, there are no clear indicators in the fleet report as to how the measures proposed in the action plan are intended to redress the perceived imbalance in the fleet segments concerned. The timeframe for the two measures were not given and one of the proposed measures was scheduled to end in 2018. One of the measures in the action plan is intended to improve economic indicators of fleet segment DTS VL1824 which has shown good economic performance (indicators are all positive) since 2013. In addition,

the measures "Temporary cessation of fishing activities" and "Permanent cessation of fishing activities" are not quantified. As such, there is no possibility for EWG to assess the extent to which the measures will redress any perceived imbalance.

It appears that there are no major issues that are not addressed by the action plan.

3.6.10 Greece (GRC)

Overview of indicator findings

Area 37

There were 28 fleet segments in 2018, of which 23 were active. Of the 23 active segments, landings and economic data were provided aggregated in 15 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 23 fleet segments active in 2018, SHI indicator values were available for 13.

According to the criteria in the 2014 Commission guidelines, the SHI indicator values for 10 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 3 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 25.27% of the total value of the landings in 2018 provided by MS, and were as follows

- 1 fleet segment may be *in balance* with their fishing opportunities;
- 2 fleet segments may be *out of balance* with their fishing opportunities.

Trends were available for the 3 fleet segments:

- All 3 fleet segments displayed a decreasing trend.

Stocks at Risk Indicator (SAR)

SAR indicator values were not calculated for any of the segments.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments		12	1	

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	11	2		

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

RoI was not calculated.

RoFTA was calculated for 16 segments:

- 9 segments were *in balance* with their fishing opportunities,
- 7 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 5 segments:

- All 5 segments displayed an increasing trend.

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

CR/BER was calculated for 16 segments:

- 9 segments were *in balance* with their fishing opportunities,
- 7 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 5 segments:

- All 5 segments displayed an increasing trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The data required to calculate VUR (i.e., maximum days-at-sea) were provided by the MS and thus, VUR220 is not analysed here.

VUR was calculated for 16 segments:

- 8 segments were *in balance* with their fishing opportunities,
- 8 segments were *out of balance* with their fishing opportunities.

No trends could be calculated.

The Inactive Fleet Indicators

In 2018, 5 vessel length classes had inactive vessels (VL0006, VL0612, VL1218, VL1824 and VL2440*)*. The Greek inactive fleet accounted for 10.0% of the total number of vessels, 6.9% of the total GT and 8.5% of the total kW. At the national level, inactive vessels accounted for less than 20% of the fleet in all 3 categories (#, GT and kW), and thus, *in balance* but displayed increasing trends.

The largest percentage of inactive vessels was present in segment VL0612 with 6% in number of vessels, 3.7% in GT and 5.2% in kW.

By vessel length group:

- 2 segments displayed an increasing trend in vessel number,
- 1 segment displayed a decreasing trend in all 3 categories,
- No trend could be calculated for 2 segments.

Synthesis of indicators and trends

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
MBS	DFN	VL0006	GRC MBS DFN0006 NGI	3,294																			
MBS	DFN	VL0612	GRC MBS DFN0612 NGI	5,162																			
MBS	DFN	VL1218	GRC MBS DFN1218 NGI*	105																			
MBS	DFN	VL1824	GRC MBS DFN1218 NGI*	1																			
MBS	DTS	VL0006	GRC MBS DTS0612 NGI*	1																			
MBS	DTS	VL0612	GRC MBS DTS0612 NGI*	109																			
MBS	DTS	VL1218	GRC MBS DTS1218 NGI	30																			
MBS	DTS	VL1824	GRC MBS DTS1824 NGI	83																			
MBS	DTS	VL2440	GRC MBS DTS2440 NGI	138																			
MBS	FPO	VL0006	GRC MBS FPO0006 NGI	61																			
MBS	FPO	VL0612	GRC MBS FPO0612 NGI*	278																			
MBS	FPO	VL1218	GRC MBS FPO0612 NGI*	5																			
MBS	FPO	VL1824	GRC MBS FPO0612 NGI*	1																			
MBS	HOK	VL0006	GRC MBS HOK0006 NGI	1,361																			
MBS	HOK	VL0612	GRC MBS HOK0612 NGI	1,774																			
MBS	HOK	VL1218	GRC MBS HOK1218 NGI*	149																			
MBS	HOK	VL1824	GRC MBS HOK1218 NGI*	11																			
MBS	PS	VL0612	GRC MBS PS 1218 NGI*	2																			
MBS	PS	VL1218	GRC MBS PS 1218 NGI*	73																			
MBS	PS	VL1824	GRC MBS PS 1824 NGI	130																			
MBS	PS	VL2440	GRC MBS PS 2440 NGI	27																			
MBS	DRB	VL0006	GRC MBS DRB0612 NGI*	4																			
MBS	DRB	VL0612	GRC MBS DRB0612 NGI*	12																			
MBS	INACTIVE	VL0006	GRC MBS INA0006 NGI	523																			
MBS	INACTIVE	VL0612	GRC MBS INA0612 NGI	861																			
MBS	INACTIVE	VL1218	GRC MBS INA1218 NGI	17																			
MBS	INACTIVE	VL1824	GRC MBS INA1824 NGI	16																			
MBS	INACTIVE	VL2440	GRC MBS INA2440 NGI	6																			
GRC Total				14,234																			

Based on indicator values for 2018 and trends over 2013-2018 and according to the criteria in the Commission guidelines, a mixed picture emerges regarding the segments that appear in or out of balance with fishing opportunities.

The three purse seine segments score well on most indicators, although two segments have a SHI pointing towards imbalance, and for all three segments the trend in the SHI indicates a worsening situation (increasing trend).

For all other segments biological indicators were not available.

The two larger demersal trawlers/seiners (vessel length 18-40 m) seem to be in balance based on (almost) all economic and technical indicators, including positive trends. The two smaller demersal trawlers/seiners segments (vessel length 6-18 m) do not perform well on any of the economic indicators, while the technical indicator (VUR) suggests balance.

The fleet segments using dredges seems to be out of balance based on both technical and economic indicators.

Fleet segments using pots and/or traps and segments using hooks all seem to be out of balance based on the technical indicator. Two out of three hooks segments also seem to

be out of balance based on the economic indicators, whereas the pots and/or traps segments and the remaining hook segment performed well on the economic indicators.

The three drift/fixed netters segments perform differently on the economic and technical indicators. One seems to be out of balance based on all indicators, whereas the remaining two segments either seem to be balanced based on the economic indicator or on the technical indicator.

The inactive fleet indicator suggests balance for all four inactive fleet segments. One fleet segment showed a decreasing trend, but one an increasing trend.

The Member States' fleet report submitted in 2020 did not explicitly assess the indicators in terms of 'in balance' or 'out of balance', but observations of EWG 20-11 and the Member States' fleet report are largely in line. No action plan was provided for unbalanced segments due to ongoing problems with the Member States' fisheries data collection programme and incomplete data in previous years.

Comparison of indicator values

A comparison Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

In the MS annual fleet report the SHI has been provided for clustered fleet segments only. Therefore, a comparison with values from EWG 20-11 is not possible.

Stocks at Risk Indicator (SAR)

In both the MS annual fleet report and EWG 20-11 the SAR has not been provided. Therefore, a comparison of values is not possible.

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

In the MS annual fleet report the CR/BER has not been provided. Therefore, a comparison with values from EWG 20-11 is not possible.

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

The comparison between RoFTA reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for all values.

The MS annual fleet report only provided a time series of the indicator for clustered fleet segments. Therefore, no comparison can be made with the trend calculated by EWG 20-11.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

The VUR and VUR220 reported in the MS annual fleet reports are only comparable with values from EWG 20-11 for three fleet segments, as other fleet segments were clustered.

There were discrepancies in the values of VUR and VUR220 with the values estimated in the framework of the EWG 20-11 for all three fleet segments. This led to a different balance conclusion for two fleet segments for VUR, and for one fleet segment for VUR220. The reason behind the discrepancies in values is unknown.

The MS annual fleet report provided a time series of the indicator, but did not calculate a trend. Therefore, no comparison was possible.

Inactive Fleet Indicator

The comparison between the inactive fleet indicator (based on number of vessels) reported in the MS annual fleet report and by EWG 20-11 revealed similar outputs for all values.

The MS annual fleet report did not calculate a trend of the indicator. Therefore, no comparison was possible.

Assessment of fleet report

The fleet report submitted by Greece provides a comprehensive analysis of the fleet capacity and its development. However, it lacks a sound and comprehensive analysis on the balance between fleet capacity and fishing opportunities. The main reason is the delayed implementation of the national fisheries data collection programme and incomplete data for previous years. The report is therefore not fully in line with the Commission guidelines COM (2014) 545.

Other points of note were as follows:

- Some stock information (F and Fmsy) was not derived from fisheries advisory bodies (e.g. GFCM, ICES), but was provided by the MS itself without explicit reference to the source. Without such information, the Expert group is unable to assess its reliability or whether the indicators have been computed in line with Commission guidelines COM(2014)545.

- The annual report contains an extensive section on biological survey protocols and fish biomass estimates from these surveys. The information presented in this section was not further used to assess the balance between capacity and fishing opportunities, and is therefore considered largely uninformative with respect to the assessment of balance.

The current Greek management system is considered by the MS to suffer from the delayed implementation of the national fisheries data collection programme. Data collected in previous years is incomplete, leading to difficulties with analysing the balance between fishing opportunities and capacity. No action plan was included with the fleet report.

Measures in action plans

No new or revised action plans were proposed.

3.6.11Ireland (IRL)

Overview of indicator findings

Area 27

There were 35 fleet segments in 2018, of which 30 were active. Of the 30 active segments, landings data were available for all fleet segments and economic data were provided aggregated in 12 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 30 fleet segments active in 2018, SHI indicator values were available for 24.

According to the criteria in the 2014 Commission guidelines, the SHI indicator values for 13 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 11 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 75.10% of the total value of the landings in 2018 provided by MS, and were as follows:

- 5 fleet segments may be *in balance* with their fishing opportunities;
- 6 fleet segments may be *out of balance* with their fishing opportunities.

Trends could be calculated for 10 segments:

- 3 fleet segments displayed a decreasing trend,
- 7 fleet segments displayed no clear trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 8 fleet segments in 2018. For all 8 fleet segments, one or more stocks-at-risk were detected:

- 1 fleet segment with 5 stocks-at-risk,
- 1 fleet segment with 3 stocks-at-risk,
- 2 fleet segments with 2 stocks-at-risk,
- 4 fleet segments with 1 stocks-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments		13	7	2

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/Fmsy is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	16	5	2	1

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

RoI was not calculated.

RoFTA was calculated for 12 segments:

- 5 segments were *in balance* with their fishing opportunities,
- 7 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 11 segments:

- 4 segments displayed an increasing trend,
- 7 segments displayed a decreasing trend.

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

CR/BER was calculated for 12 segments:

- 5 segments were *in balance* with their fishing opportunities,
- 7 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for only 11 segments:

- 4 segments displayed an increasing trend,
- 5 segments displayed a decreasing trend,
- 2 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

VUR was calculated for 8 segments:

- 2 segments were *in balance* with their fishing opportunities,
- 6 segments were *out of balance* with their fishing opportunities.

Trends could only be calculated for 3 segments:

- 1 segment displayed an increasing trend,
- 1 segment displayed a decreasing trend,
- 1 segment displayed no clear trend.

VUR_{220} was calculated for 18 segments:

- 4 segments were *in balance* with their fishing opportunities,
- 14 segments were *out of balance* with their fishing opportunities.

Trends for the 18 segments were as follows:

- 1 segment displayed an increasing trend,
- 17 segments displayed no clear trend.

The Inactive Fleet Indicators

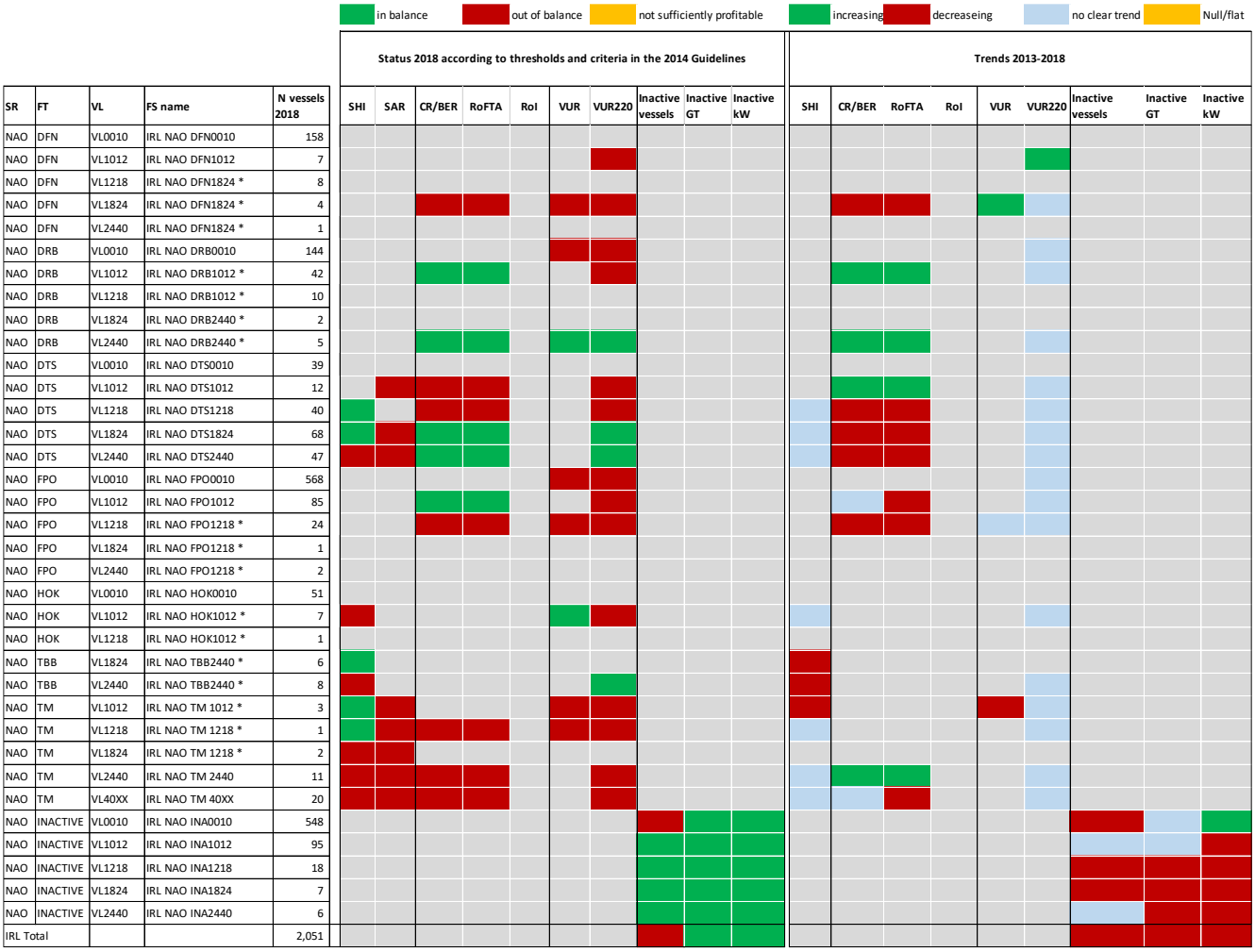
In 2018, 5 vessel length classes had inactive vessels (VL0010, VL1012, VL1218, VL1824 and VL2440). The Irish inactive fleet accounted for 32.9% of the total number of vessels, 7.1% of GT and 14% of the total kW. At the national level, inactive vessels accounted for more than 20% of the fleet in vessel number and thus, was *out of balance* and displayed a decreasing trend in all 3 categories.

The segment with the highest level of inactivity is the VL0010 segment at 26.7% in terms of number of vessels and 6.8% in kW.

By vessel length group:

- 1 segment was *out of balance* in terms of vessel numbers, and displayed an decreasing trend,
- 4 segments were *in balance* and displayed either no clear trend or a decreasing trend for all 3 categories.

Synthesis of indicators and trends



From a total of 35 fleet segments, no indicator values could be computed for 10 segments.

An overview of the indicators presents a mixed picture for 2018. SHI values were computed for 11 segments 5 of which appear to be in balance. In terms of trends, the situation appears to either be worsening or there are no no clear trends.

The situation regarding economic indicators is also mixed but for the majority of segments for which an economic indicator could be computed, the situation in 2018 was unfavourable. Trends in economic indicators are also mixed and there are only 2 fleet segments for which the situation in 2018 is favourable and the trend over 2014-2018 is improving.

Comparison of indicator values

A comparison Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

Ireland presented SHI values calculated by the STECF EWG 19-13, where 2018 values were on preliminary basis. For this reason, Ireland based their balance assessment on the 2017 values. According to fleet report, although according to the SHI, 12 fleet segments may not be in balance with their fishing opportunities, Ireland concludes that it is not valid to state that stock is over-exploited each time F is slightly above Fmsy, and that stock can be considered over-exploited only when they are consistently fished above Fpa.

Since Ireland used EWG data for their assessment no comparison can be made.

Values for period 2008-2018 are provided.

Stocks at Risk Indicator (SAR)

In relation to the fleets that may be out of balance in relation to SAR, as calculated by STECF EWG 19-13, Ireland concludes that Irish fleets take minor catches of the vulnerable stocks, and that they don't have sufficient data in order to assess whether fleets take more than 10% of the landings of the vulnerable stocks.

Since Ireland used EWG data for their assessment no comparison can be made.

Values for period 2008-2018 are provided.

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

The results of CR/BER are broadly positive again showing the four segments have RoFTA indicator showing imbalance, namely the trawl and seiner fleet segments of 10-12m, 12-18m and 18-24m along with the hook and lines segment of 10-12m. All other fleet segments have indicator values indicating balance.

Values for period 2008-2018 are provided but with no trend indication.

A direct comparison between indicator values in the MS' Fleet reports for 2019 and the values for equivalent fleet segments as estimated by EWG 20-11 is not possible because different methodology used. However, comparison of balance assessment is presented as follow in the table.

No. of segments	Out of balace	In balance
EWG 20-11	7	5
MS Fleet Report	4	17

Return on Fixed Tangible Assets (RoFTA)

Ireland provided values for RoFTA using the declared landing income in combination with costs stated in the DCF surveys and the 5-year average interest rate from the ECB to Ireland. Presented values indicates that Irish fleet are broadly positive with four segments failing the RoFTA indicator, the trawl and seiner fleet of 10-12m, 12-18m and 18-24m along with the hook and lines segment between 10-12m.

All other segments pass the indicators with the important length class of 24-40m showing strong long-term profitability in 2018. Both of the main pelagic fleet segments (TM) show a steady return on fixed tangible assets in 2017.

Values for period 2008-2018 are provided but with no trend indication.

A direct comparison between indicator values in the MS' Fleet reports for 2019 and the values for equivalent fleet segments as estimated by EWG 20-11 is not possible because different methodology used. However, comparison of balance assessment is presented as follow in the table.

No. of segments	Out of balace	In balance
EWG 20-11	7	5
MS Fleet Report	4	10

The Vessel Use Indicator (VUR)

Ireland provided in the separate excel document detailed calculation based on theoretical and observed number of days, however Fleet report is missing any comment or conclusions made on this ground.

Values for period 2003-2019 are provided but with no trend indication.

A direct comparison between indicator values in the MS Fleet report and values calculated by EWG 20-11 is not possible due to a different segmentation, but it also indicating significant differences in the results and number of segments assessed. Since Fleet report is missing any comment on this no conclusion can be made. Comparison of balance assessment is presented as follow in the table.

Ireland calculated VUR for maximum number observed per segmnet, while for max days possible 365 was used.

No. of segments for VUR	Out of balace	In balance
EWG 20-11	6	2

MS Fleet Report	16	9

Assessment of fleet report

Ireland provided comprehensive analyses of balance between fleet capacity and fishing opportunities in line with Commission guidelines COM(2014)545. However, the Member State considers that basing the indicator values on the segmentation used by the Expert group (DCF segmentation) does not allow proper assessment of highly diverse nature of the fleet or range of natural variations within fleet segments. While the biological indicators values are computed based on the DCF segmentation, an alternative national segmentation is used for economic and technical indicators, while Inactive fleet indicator has not been provided.

Based on all available information Ireland considers that structural imbalance does not exist and therefore, there is no action plans proposed.

Measures in action plans

No new or revised action plans were proposed.

3.6.12 Italy (ITA)

Overview of indicator findings

There were 32 fleet segments in 2018, of which 25 were active. Of the 25 active segments, landings and economic data were provided for 24 fleet segments.

Sustainable Harvest Indicator (SHI)

Area 37

Of the 23 MBS segments active in 2018, SHI indicator values were available for 22.

According to the criteria in the 2014 Commission 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 16 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 62.02% of the value of the landings in 2018 provided by MS, and were as follows:

- All 16 fleet segments may be *out of balance* with their fishing opportunities.

Trends could be calculated for 10 fleet segments:

- 3 fleet segments displayed a decreasing trend,
- 7 fleet segments displayed no clear trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 7 fleet segments in 2018. For all 7 fleet segments, one or more stocks-at-risk were detected:

- 2 fleet segments with 3 stocks-at-risk,
- 2 fleet segments with 2 stocks-at-risk,
- 3 fleet segments with 1 stocks-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for all the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments				22

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	5	8	6	3

OFR

Sustainable Harvest Indicator (SHI)

Out of the 2 active fleet segments in 2018, SHI indicator values were available for both. However, according to the criteria in the 2014 Commission guidelines, the SHI indicator value 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 values were not calculated for any of the segments.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments				2

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/Fmsy is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	2			

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

There were 35 fleet segments in the Italian fleet in 2017 of which 28 were active. After clustering 23 segments were available for analysis.

RoI was calculated for 3 segments:

- 1 segment was *in balance* with their fishing opportunities,
- 2 segments were *out of balance*.

No trends could be calculated.

RoFTA was calculated for 22 segments:

- 19 segments were *in balance* with their fishing opportunities,
- 2 segments were *out of balance* with their fishing opportunities,
- 1 segment was *not sufficiently profitable*.

Trends could be calculated for 17 segments:

- 14 segments displayed an increasing trend,
- 2 segments displayed a decreasing trend,
- 1 segment displayed no clear trend.

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

CR/BER was calculated for 22 segments:

- 19 segments were *in balance* with their fishing opportunities,
- 3 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 17 segments:

- 12 segments displayed an increasing trend,
- 5 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The data required to calculate VUR (i.e., maximum days-at-sea) were provided by the MS and thus, VUR_{220} is not analysed here.

VUR was calculated for 23 segments:

- 15 segments were *in balance* with their fishing opportunities,
- 8 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 16 segments:

- 3 segments displayed an increasing trend,
- 13 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, 6 vessel length segments in MBS and 1 segment in OFR had inactive vessels (VL0006, VL0612, VL1218, VL1824, VL2440 and VL40XX).

The inactive Italian fleet accounted for 8.3% of the total number of vessels, 4.6% of the total GT and 5% of the total kW.

At the national level, inactive vessels accounted for less than 20% of the fleet in vessel number and thus, was *in balance*, and displayed a decreasing trend in all 3 categories (#, GT and kW).

The segment with the highest levels of inactivity are the VL0612 group at 5% of the total number of vessels.

By vessel length group:

- All 7 segments were *in balance* in all 3 categories, with varying trends.

Synthesis of indicators and trends

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
MBS	DRB	VL0612	ITA MBS DRB1218 NGI*	15																			
MBS	DRB	VL1218	ITA MBS DRB1218 NGI*	688																			
MBS	DTS	VL0612	ITA MBS DTS0612 NGI	128																			
MBS	DTS	VL1218	ITA MBS DTS1218 NGI	1,184																			
MBS	DTS	VL1824	ITA MBS DTS1824 NGI	619																			
MBS	DTS	VL2440	ITA MBS DTS2440 NGI	152																			
MBS	HOK	VL1218	ITA MBS HOK1218 NGI	224																			
MBS	PGP	VL0006	ITA MBS PGP0006 NGI	2,173																			
MBS	PGP	VL0612	ITA MBS PGP0612 NGI	5,154																			
MBS	PGP	VL1218	ITA MBS PGP1218 NGI*	236																			
MBS	PGP	VL1824	ITA MBS PGP1218 NGI*	6																			
MBS	PS	VL0612	ITA MBS PS 0612 NGI	90																			
MBS	PS	VL1218	ITA MBS PS 1218 NGI	145																			
MBS	PS	VL1824	ITA MBS PS 1824 NGI	45																			
MBS	PS	VL2440	ITA MBS PS 2440 NGI	29																			
MBS	PS	VL40XX	ITA MBS PS 40XX NGI	12																			
MBS	TBB	VL1218	ITA MBS TBB1218 NGI	12																			
MBS	TBB	VL1824	ITA MBS TBB1824 NGI	23																			
MBS	TBB	VL2440	ITA MBS TBB2440 NGI	28																			
MBS	TM	VL1218	ITA MBS TM 1218 NGI	29																			
MBS	TM	VL1824	ITA MBS TM 1824 NGI	51																			
MBS	TM	VL2440	ITA MBS TM 2440 NGI	37																			
MBS	HOK	VL1824	ITA MBS HOK1824 NGI	51																			
OFR	DTS	VL40XX	ITA OFR DTS40XX IWE	7																			
OFR	PS	VL40XX	ITA OFR PS 40XX IWE	1																			
MBS	INACTIVE	VL0006	ITA MBS INA0006 NGI	295																			
MBS	INACTIVE	VL0612	ITA MBS INA0612 NGI	618																			
MBS	INACTIVE	VL1218	ITA MBS INA1218 NGI	41																			
MBS	INACTIVE	VL1824	ITA MBS INA1824 NGI	33																			
MBS	INACTIVE	VL2440	ITA MBS INA2440 NGI	18																			
MBS	INACTIVE	VL40XX	ITA MBS INA40XX NGI	1																			
OFR	INACTIVE	VL2440	ITA OFR INA2440 IWE	1																			
ITA Total				12,146																			

Based on indicator values for 2018 and trends over 2014-2018 and according to the criteria in the Commission guidelines, all fleet segments for biological variables appear to

be out of balance with fishing opportunities. Trends show an improving situation for three of these segments while no clear trend is obvious for the rest. All fleet segments, excepting MBS TBB 2440 NGI, MBS HOK 1824 NGI and OFR DTS 40XX IWE, appeared in balance for economic variables, however the majority of segments show a deteriorating trend or no clear trend. Sixty five percent of fleet segments appear to be in balance for VUR variables, however most show no clear trend with three segments showing a deteriorating trend.

These observations are not easily compared to the Member States' fleet report submitted in 2020 due to a different reporting methodology. The MS has submitted an action plan to significantly reduce current fishing mortality through a series of measures.

Comparison of indicator values

The Italian annual fleet report is based on a fleet segmentation that is entirely different to that used by the Expert group. A comparison between indicator values computed by the Expert group with those prepared by the Member State cannot be made.

Assessment of fleet report

The fleet report submitted by Italy provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments. The fleet balance was assessed using biological, economic, and technical indicators for 2018: (SHI), (ROFTA), (CR/BER), (VUR) and (VI).

The fleet report submitted by Italy is in line with the Commission guidelines COM(2014)545.

Italy also created protected fishing areas banning the use for trawling and dredging and nursery zones for juvenile hake in GSAs 9, 10 and 11 under a fishing complete ban.

For fleet managed purposes the Italian annual report split fleet segments in several GSA areas. A comparison between the Italian national report and STECF data is therefore not possible.

Measures in action plans

The report presents an action plan which is similar to that presented with the 2019 fleet report. The main target of the plan is to reduce the fishing effort for demersal species through a series of measures, to allow stocks recover within safe biological limits by 2020. These measures include;

- An increase of approximately 60% in the number of "stop days" for all fleets in all areas in 2020.
- The obligation for vessels fishing in GSAs 9, 10 and 11 to use electronic logbooks to record fishing activity.
- A ban on the use of bottom trawling, pair trawling or dredging of molluscs in GSAs 9, 10 and 11.
- A complete fishing ban in five areas in GSA 9, 10 and 11 that have been identified as nursery zones for juvenile hake.
- Fleet activity restrictions in GSA 17 and 18 to reduce fishing mortality with regard to sardines and anchovies
- The establishment of a number of Fisheries Restricted Areas, some of which will be closed to bottom trawling, while others will have a total fishing ban.

Apart from the measures put in place for small pelagics in GSA 17 and 18, which will run to the end of 2021, none of the other measures have a proposed end date. As a result it is not possible to assess whether the targets proposed in these measures will be met.

3.6.13 Latvia (LVA)

Overview of indicator findings

Area 27

There were 4 fleet segments in the Latvian fleet in 2018, of which 3 were active. Of the 3 active segments, landings and economic data were provided for all segments.

Sustainable Harvest Indicator (SHI)

Out of 3 active fleet segments in 2018, SHI indicator values were available for 3.

SHI indicator value 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 2 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 88.45% of the total value of the landings in 2018 provided by MS, and were as follows:

- 1 fleet segment may be *in balance* with its fishing opportunities;
- 1 fleet segment may be *out of balance* with their fishing opportunities.

Trends were calculated for the 2 fleet segments:

- 1 fleet segment displayed a decreasing trend,
- 1 fleet segment displayed no clear trend.

Stocks at Risk Indicator (SAR)

SAR indicator values were not calculated for any of the segments.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the 3 fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments		1	2	

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	2		1	

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

RoI was not calculated.

RoFTA was calculated for 3 segments:

- All 3 segments were *in balance* with their fishing opportunities.

Trends were calculated for 3 segments:

- 2 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend.

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

CR/BER was calculated for 3 segments:

- All 3 segments were *in balance* with their fishing opportunities.

Trends were calculated for 3 segments:

- 2 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The data required to calculate VUR (i.e., maximum days-at-sea) were provided by the MS and thus, VUR^{220} is not analysed here.

VUR was calculated for 3 segments:

- 2 segments were *in balance* with their fishing opportunities,
- 1 segment was *out of balance* with their fishing opportunities.

Trends were calculated for 3 segments:

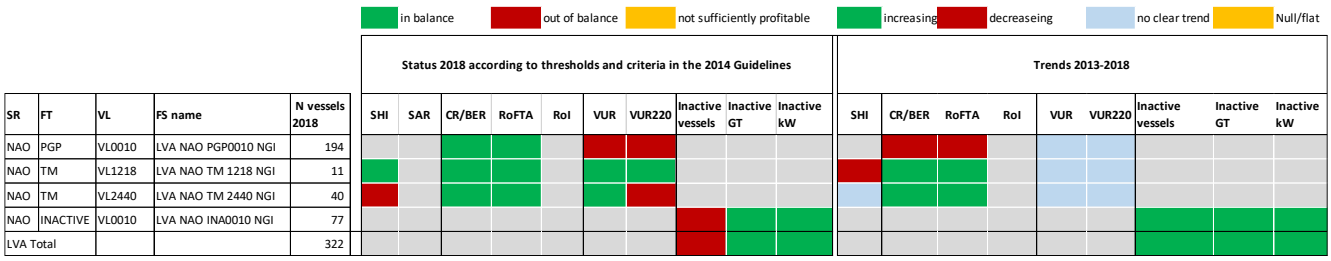
- All 3 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, 1 vessel length segment had inactive vessels (VL0010).

The total inactive Latvian vessels account for 23.9% of the total number of vessels, 2.0% of the total GT and 3.7% of the total kW. At the national level, inactive vessels accounted for more than 20% of the fleet in number of vessels and thus, was *out of balance,* and displayed an increasing trend. The inactive segment was in balance in terms on GT and kW but displayed an increasing trend for both.

Synthesis of indicators and trends



SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
NAO	PGP	VL0010	LVA NAO PGP0010 NGI	194																			
NAO	TM	VL1218	LVA NAO TM 1218 NGI	11																			
NAO	TM	VL2440	LVA NAO TM 2440 NGI	40																			
NAO	INACTIVE	VL0010	LVA NAO INA0010 NGI	77																			
LVA Total				322																			

Based on indicator values for 2018 and trends over 2013-2018 and according to the criteria in the Commission guidelines, for economic and VUR data the majority of fleet segments appear to in balance with fishing opportunities. For biological indicators TM 1218 NGI appears to be in balance with fishing opportunities and shows an improving situation, (decreasing trend in SHI). The biological indicators suggest that the TM 2440 NGI segment may be out of balance, with SHI showing no clear trend.

The above observations are largely in line with the assessment of balance in the Member States' fleet report submitted in 2020. An action plan has been proposed for unbalanced segments.

Comparison of indicator values

A comparison Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

In the MS annual fleet report the SHI has been provided for the reference year 2018 for two fleet segments. While there are small differences in the data between the national report and the EWG calculations the indications of whether segments are in balance or not is the same for both datasets.

Data have not been provided in the member state report for the PGP0010 segment, but it has been calculated by the EWG.

Trends are decreasing for this indicator in the VL1218 TM fleet segment while they are flat in the VL2440 TM segment.

Stocks at Risk Indicator (SAR)

In the MS annual fleet report the SAR has not been provided for the reference year 2018.

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

Discrepancies were found between the MS annual fleet report and those estimated in the framework of EWG 20-11, specially for the VL0010 PGP fleet segment. For all fleet segments the indicator values from the MS annual fleet report are lower than the one calculated by the EWG. All fleet segments reveal positive values for this indicator.

Trends are similar for this indicator with an increase in VL1218 TM and VL2440 TM and a decrease on VL0010 PGP.

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

The comparison between Rofta reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs. All fleet segments reveal positive values for this indicator.

Trends are similar for this indicator with an increase in VL1218 TM and VL2440 TM and a decrease on VL0010 PGP.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

The comparison between VUR reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values. The MS annual fleet report did not provided values for VUR220.

Trends for the fleet segments are similar with no specific trend.

Inactive Fleet Indicator

Inactive vessels information is missing from the EWG 20-11 dataset for VL1218 and VL2440 but were presented in MS annual report. For VL1012 it was the opposite, no data were presented in MS fleet report. Due to a lack of information it is not possible to comment on trends.

Assessment of fleet report

General remarks

The fleet report submitted by Latvia provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments. The fleet balance was assessed using biological, and technical indicators for 2018: (SHI), (VUR) and (VI).

The fleet report submitted by Latvia is in line with the Commission guidelines COM(2014)545.

Measures in action plans

Based on biologic and technical indicators Latvia will implement an action plan in order to reduce fleet capacity for VL2440 TM fleet segment. This will be achieved through the permanent withdrawal from fishing activity of a number of vessels which were involved in the cod fishery between 2014 and 2018. The plan expects a reduction in the number of vessels of up to 24%.

The explicit objective of the proposed measures is to reduce fleet capacity by reducing the number of vessels that formerly were involved in the cod fishery. The reasons behind that objective are not explicit and the likely effects of such a reduction on the balance between capacity and fishing opportunities cannot be foreseen.

3.6.14 Lithuania (LTU)

Overview of indicator findings

There were 16 fleet segments in the Lithuanian national fleet in 2018, of which 10 were active (8 in NAO and 2 in OFR). Of the 10 active segments, landings data were available for all segments while economic data were provided aggregated in 5 fleet segments. Indicator results are provided by main supra-region below.

Area 27

There were 13 fleet segments in the N Atlantic fleet in 2018, of which 8 were active. Of the 8 active segments, landings data were available for all segments while economic data were provided aggregated in 4 fleet segments.

OFR

There were 3 fleet segments in the OFR fleet in 2018, of which 3 were active. Of the 2 active segments, landings data were available for all segments while economic data were provided for 1 fleet segment.

Sustainable Harvest Indicator (SHI)

Area 27

Out of 8 fleet segments active in 2018, SHI indicator values were available for 7.

According to the criteria in the 2014 Commission 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 3 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 72.08% of the total value of the landings in 2018 provided by MS, and were as follows:

- 3 fleet segments may *be out of balance* with their fishing opportunities.

Trends were available for the 8 fleet segments:

- 1 fleet segment displayed an increasing trend,
- 4 fleet segments displayed decreasing trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 5 fleet segments:

- 5 fleet segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the 7 fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	2	2		3

Economic Dependency Indicator (EDI)
Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/Fmsy is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments				7

OFR

Out of 2 active fleet segments in 2018, SHI indicator values were available for 2.

The 2 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 100% of the total value of the landings in 2018 provided by MS, and were as follows:

- 1 fleet segment may be *in balance* with its fishing opportunities;
- 1 fleet segment may be *out of balance* with their fishing opportunities.

Trends were calculated for the 2 fleet segments:

- 2 fleet segments displayed no clear trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 1 fleet segment in 2018:

- 1 fleet segment with 2 stocks-at-risk.

Number of Overharvested Stocks (NOS)
The proportional distribution of NOS for the 7 fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	1	1		

Economic Dependency Indicator (EDI)
Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/Fmsy is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%

N of fleet segments	1	1		

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

RoI was calculated for 5 segments:

- 2 segments were *in balance* with their fishing opportunities,
- 3 segments were *out of balance* with their fishing opportunities,

Trends could not be calculated for the 5 segments.

RoFTA was calculated for 5 segments:

- 2 segments were *in balance* with their fishing opportunities,
- 3 segments were *out of balance* with their fishing opportunities,

Trends were calculated for the 5 segments:

- 1 segment displayed an increasing trend,
- 4 segments displayed a decreasing trend.

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

CR/BER was calculated for 10 segments:

- 6 segments were *in balance* with their fishing opportunities,
- 4 segments were *out of balance* with their fishing opportunities,

Trends for the 10 segments were as follows:

- 1 segment displayed an increasing trend,
- 1 segment displayed a decreasing trend,
- 8 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

VUR was calculated for 5 segments:

- All 5 segments were *out of balance* with their fishing opportunities.

Trends were calculated for 5 segments:

- 1 segment displayed a decreasing trend,
- 4 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2019, 6 vessel length segments had inactive vessels (VL0010, VL1012, VL1218, VL1824, VL2440 and VL40XX).

The Lithuanian inactive fleet accounted for 38.1% of the total number of vessels, 18.4% of the total GT and 25.6% of the total kW. At the national level, inactive vessels accounted for more than 20% of the fleet in 2 categories (# and kW), and thus, was *out of balance* and displayed increasing trends in all 3 categories (#, GT and kW)

The segments with the highest level of inactivity is the VL0010 segment at 24.5% in terms of number of vessels and VL40XX with 15.6% of GT and 19.1% of kW.

By vessel length group:

- 1 segment was *out of balance* in terms of vessel numbers,
- 5 segments were *in balance* in all 3 categories.

Synthesis of indicators and trends

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
NAO	DFN	VL1012	LTU NAO DFN1012 NGI*	4																			
NAO	DFN	VL2440	LTU NAO DFN1012 NGI*	2																			
NAO	DTS	VL1824	LTU NAO DTS2440 NGI*	2																			
NAO	DTS	VL2440	LTU NAO DTS2440 NGI*	7																			
NAO	PG	VL0010	LTU NAO PG 0010 NGI	60																			
NAO	TM	VL40XX	LTU NAO TM 2440 NGI*	1																			
NAO	TM	VL1824	LTU NAO TM 2440 NGI*	1																			
NAO	TM	VL2440	LTU NAO TM 2440 NGI*	8																			
OFR	DTS	VL40XX	LTU OFR TM 40XX NEU*	2																			
OFR	TM	VL40XX	LTU OFR TM 40XX NEU*	4																			
NAO	INACTIVE	VL0010	LTU NAO INA0010 NGI	36																			
NAO	INACTIVE	VL1012	LTU NAO INA1012 NGI	5																			
NAO	INACTIVE	VL1218	LTU NAO INA1218 NGI	1																			
NAO	INACTIVE	VL1824	LTU NAO INA1824 NGI	1																			
NAO	INACTIVE	VL2440	LTU NAO INA2440 NGI	9																			
OFR	INACTIVE	VL40XX	LTU OFR INA40XX NEU	4																			
LTU Total				147																			

Based on indicator values for 2018 and trends over 2014-2018 and according to the criteria in the Commission guidelines, three fleet segments appear not to be in balance with fishing opportunities. Lithuania shows an imbalance in fleet segments NAO DFN 1012, NAO DTS 2440 and the distant fleet OFR TM 40XX.The economic indicators suggest that the fleet segment NAO PG 0010 NGI is in balance with fishing opportunities.

The above observations are largely in line with the assessment of balance in the Member States' fleet report submitted in 2020 where the MS proposes an action plan for the fleet segments NAO DFN 1012 and NAO DTS 2440. However, it does not propose any action plan for the distant fleet segment OFR TM 40XX.

Comparison of indicator values

A comparison Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

In the MS annual fleet report the SHI has been provided for the reference year 2018.

Despite the fact that the Lithuanian Baltic sea fleet in 2018 consisted of 9 fleet segments SHI was estimated only for 3 fleet segments. It was correctly computed for those fleet segments where the coverage ratio of the assessed stocks was greater than 40%. The 3 segments for which SHI was estimated are TM VL1824, TM VL2440 and TM VL40XX.

A comparison between indicator values in the MS' Fleet reports for 2019 and the values for equivalent fleet segments as estimated by EWG 20-11 indicate that the status of the 3 segments for which a comparison can be made remains the same. There are similar outputs for all values. All these 3 fleet segments are out of balance.

The SHI values for the 3 segments estimated for the period 2013-2018, based on a relevant graph included in MS report, show an increasing trend. Moreover, the fleet segment TM 2440 in Baltic Sea is in balance for the same period as analysed by EWG 20-11. For no other segment any analysis on the trend can be extracted.

Stocks at Risk Indicator (SAR)

In the MS annual fleet report the SAR has been provided for the reference years 2016 – 2018 for 8 fleet segments, for cod stock in subdivisions 24-32.

The comparison between SAR reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed the same outputs for all the values and as a consequence the result.

The trend for the last three years analysed in MS's report is stable.

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

In the MS annual fleet report the CR/BER ratio has been provided for the reference years 2014-2018 for 5 fleet segments.

A comparison between indicator values in the MS' Fleet reports for 2019 and the values for equivalent fleet segments as estimated by EWG 20-11 for the year 2018 show the same estimations for all the fleet segments.

As for the dynamics of the fleet segments for the last 3 years (2016-2018), the annual report of the MS for the distant fleet OFR TM40XX indicate possibility of overcapitalisation since the ratio is below 1 for all the years. The same stands for the demersal trawlers (DTS 24-40m) operating in Baltic Sea and also for the clustered fleet segment NAO DFN10-12m. It is noted that the last is being negative for all the period, showing evident imbalance of economic viability.

On the other hand, the segment of pelagic trawlers fishing in Baltic Sea (NAO TM24-40m) show that the segment is profitable with potential of undercapitalisation since 2014. The same picture for economic capability is shown for the small-scale fleet segment which operates in coastal areas (NAO PG 00-10m) during the period 2009-2018.

Based on EWG 20-11 analysis the fleet segment DFN 1012 operating in Baltic Sea show a negative trend for the period 2013-2018 whereas the small-scale fleet PG0010 is having a positive trend.

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

In the MS annual fleet report RoFTA indicator is provided for the reference years 2014-2018 for 5 fleet segments, whereas ROI, which takes into account the intangible assets is estimated since 2017 due to the fact that Lithuania introduced by law a system of transferrable fishing rights in December 2016. ROI is estimated for the same fleet segments as RoFTA.

The comparison between ROI and RoFTA reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed the same outputs for all values for the reference year 2018.

Potential overcapacity in MS report is indicated for the distant fleet segment (OFR TM 40XX) since RoFTA is being negative during the period 2015-2018 and ROI for 2017-2018. The same status stands for demersal trawlers operating in Baltic Sea (NAO DTS 24-40m) and the fleet segment NAO DFN 10-12m. On the other hand, large scale pelagic trawlers segment shows long-term economic efficiency. During the period 2014-2018 RoFTA had a negative value only for 2017. The small-scale fleet segment operating in coastal areas indicate long-term capital productivity since both indicators RoFTA for the period 2014-2018 and ROI for the period 2017-2018) are well above the risk-free long-term interest rate.

Based on EWG 20-11 analysis the fleet segments DFN 1012, DTS 2440 and TM2440 operating in Baltic Sea show a negative trend for the period 2013-2018. The same for the distant fleet TM 40XX. That's not the case for the small-scale fleet PG0010 which it is having a positive trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220}**)**

A small discrepancy in the values has been observed in the calculation of VUR between the MS annual fleet report and the ones estimated in the framework of the EWG 20-11 but with the same status "out of balance".

In the MS annual fleet report the VUR Indicator was calculated as the ratio between days at sea and maximum days at sea for each length group and gear type. MS says that the theoretical maximum days at sea (220 days) cannot be used due to small -scale fleet segments part time/seasonal fishing activities and thus, it did not calculate the VUR_{220}.

EWG 20-11 except for the VUR it also reported the VUR_{220}.

The fleet segment TM 2440m operating in Baltic Sea shows that the indicator VUR is out of balance for the whole period 2013-2018. On the other hand, the distant fleet segment (TM 40XX) indicates that the VUR_{220} is in balance for the same period.

Inactive Fleet Indicator

Inactive vessels have been reported as number, GT and kW in the MS annual fleet report, but this information is missing in the EWG 20-11 dataset, because Lithuania did not provide it in the DCF.

This indicator is reduced for some fleet segments, increased for others or remain stable. No important trend is shown.

Assessment of fleet report

The fleet report submitted by Lithuania provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments.

The fleet report submitted by Lithuania is in line with the Commission guidelines COM(2014)545.

A comparison between indicator values in the MS' Fleet reports for 2019 and the values for equivalent fleet segments as estimated by EWG 20-11 indicate that the status for all

the indicators for all the segments for which a comparison can be made remains the same. There are similar outputs for all values.

The current Lithuanian management system is considered by the MS not to be well functioning in order to secure a balance between fishing opportunities and capacity and thus, an action plan is proposed.

Specifically, the 2019 annual report on sustainable balance between fishing capacity and fishing opportunities of Lithuania shows an imbalance in fleet segment NAO DTS 24-40, which consists of 24-40 m length demersal trawlers fishing in Baltic Sea, and in fleet segment NAO DFN 10-12, which consists of 10-12 m length vessels, fishing by passive gears in Baltic Sea coastal area, and of 24-40 m length vessels, fishing by passive gears (gillnets) in Baltic Sea. The main reason of this imbalance is very poor status of Eastern Baltic cod resources. These three sectors indicate that all the indicators (biological, economic and technical) except the economic ones (CR/BER, RoFTA/ROI and NPM) for the fleet segment TM 2440 are out of balance.

Another fleet segment which indicates problems of overcapacity and economic inefficiency is the distant fleet (OFR TM 40XX) which operates outside EU waters. In this case all the indicators (biological, economic and technical) except the VUR are out of balance.

An action plan is proposed for the Baltic Sea fleet but no action plan is proposed for the distant water fleet segment.

Measures in action plans

The eastern Baltic cod is in poor condition. Due to the importance of this stock for the landings for the fleet segments DFN 1012, DTS 2440 and TM 2440 operating in Baltic sea the following measures proposed by Lithuania in order to reduce the pressure on the stock:

- System of transferable fishing concessions (TFC) as an effective tool to address overcapacity. In Lithuania the TFC system was introduced in 2016. MS says that it is too early to evaluate the effectiveness of this measure.
- Scrapping scheme with public compensation for permanent cessation of fishing for reducing overcapacity If relevant amendment of Regulation (EU) No. 508/2014 allows it.

With the information currently available, it is not possible to judge the extent to which the proposed measures are likely to reduce pressure on the eastern Baltic cod stock.

3.6.15 Malta (MLT)

Overview of indicator findings

Area 37

There were 24 fleet segments in 2018, of which 19 were active. Of the 19 active segments, landings and economic data were provided aggregated in 10 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 10 active fleet segments in 2018, SHI indicator values were available for 10.

According to the criteria in the 2014 Commission guidelines, the SHI indicator values for 9 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 1 fleet segment for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 12.50% of the total value of the landings in 2018 provided by MS, and were as follows:

- 1 fleet segment may be *out of balance* with their fishing opportunities.

Trends were available for the 1 fleet segment:

- 1 fleet segment displayed no clear trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 3 fleet segments in 2018. For all 3 fleet segments, one stock-at-risk was detected:

- 3 fleet segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the 10 fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments			1	9

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	7	2	1	

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

RoI was calculated for 7 segments:

- 6 segments were *in balance* with their fishing opportunities,
- 1 segment was *out of balance* with their fishing opportunities.

Trends could be calculated for 4 segments:

- 3 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend.

RoFTA was calculated for 10 segments:

- 3 segments were *in balance* with their fishing opportunities,
- 6 segments were *out of balance* with their fishing opportunities
- 1 segment was *not sufficiently profitable*.

Trends could be calculated for 5 segments:

- 3 segments displayed an increasing trend,
- 2 segments displayed a decreasing trend.

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

CR/BER was calculated for 10 segments:

- 4 segments were *in balance* with their fishing opportunities,
- 6 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 5 segments:

- 3 segments displayed an increasing trend,
- 2 segments displayed a decreasing trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

VUR was calculated for 10 segments:

- 6 segments were *in balance* with their fishing opportunities,
- 4 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 5 segments:

- 2 segments displayed a decreasing trend,
- 2 segments displayed no clear trend
- 1 segment displayed a null/flat trend.

The Inactive Fleet Indicators

In 2017, 5 vessel length segments had inactive vessels (VL0006, VL0612, VL1218, VL1824 and VL2440).

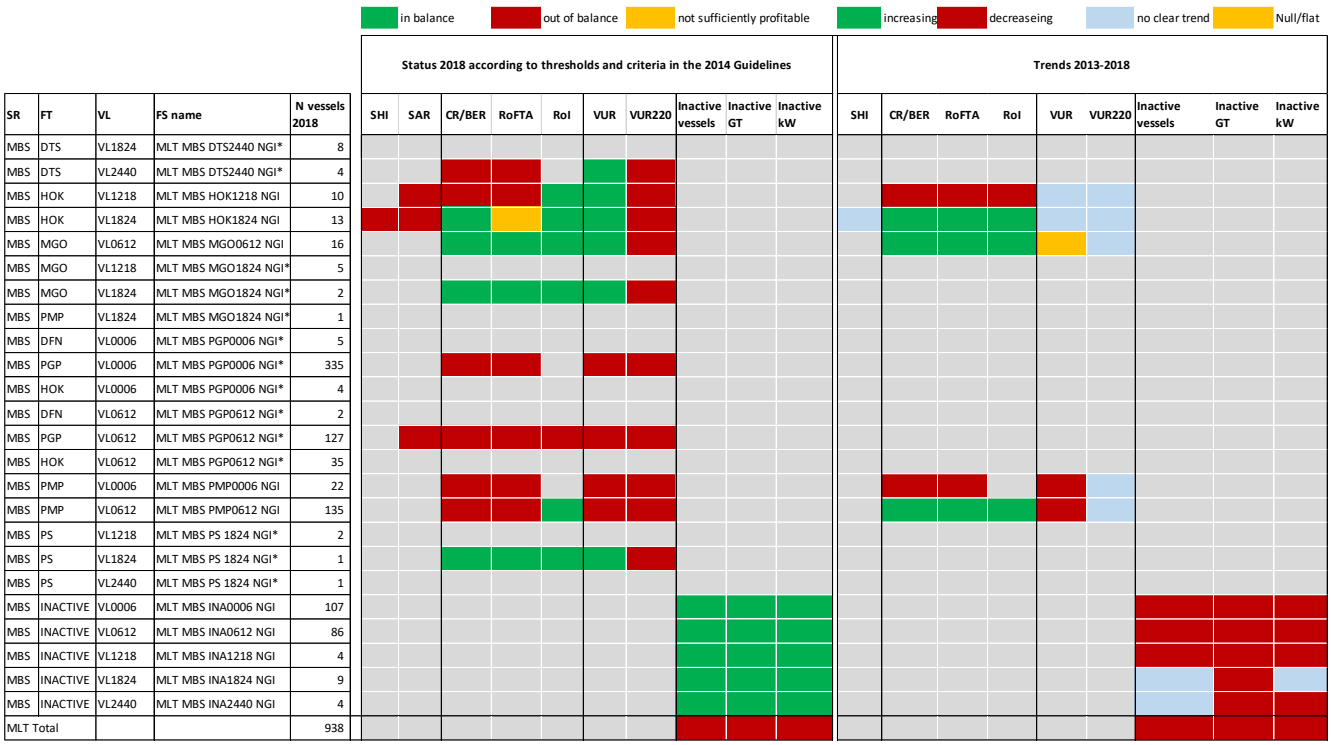
The Maltese inactive fleet accounted for 22.4% of the total number of vessels, 24.5% of the total GT and 22.6% of the total kW. At the national level, inactive vessels accounted for more than 20% of the fleet in vessel number and thus, was *out of balance* but displayed decreasing trends.

The segments with the highest level of inactivity were the VL0006 segment with 11.4% in terms of number of vessels, the VL0612 segment with 10.7% of the kW and VL1824 with 9.3% of GT.

By vessel length group:

- All segments were *in balance* in all 3 categories (#, GT and kW),
- 3 segments displayed decreasing or no clear trends in all 3 categories (#, GT and kW).

Synthesis of indicators and trends



SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
MBS	DTS	VL1824	MLT MBS DTS2440 NGI*	8																			
MBS	DTS	VL2440	MLT MBS DTS2440 NGI*	4																			
MBS	HOK	VL1218	MLT MBS HOK1218 NGI	10																			
MBS	HOK	VL1824	MLT MBS HOK1824 NGI	13																			
MBS	MGO	VL0612	MLT MBS MGO0612 NGI	16																			
MBS	MGO	VL1218	MLT MBS MGO1824 NGI*	5																			
MBS	MGO	VL1824	MLT MBS MGO1824 NGI*	2																			
MBS	PMP	VL1824	MLT MBS MGO1824 NGI*	1																			
MBS	DFN	VL0006	MLT MBS PGP0006 NGI*	5																			
MBS	PGP	VL0006	MLT MBS PGP0006 NGI*	335																			
MBS	HOK	VL0006	MLT MBS PGP0006 NGI*	4																			
MBS	DFN	VL0612	MLT MBS PGP0612 NGI*	2																			
MBS	PGP	VL0612	MLT MBS PGP0612 NGI*	127																			
MBS	HOK	VL0612	MLT MBS PGP0612 NGI*	35																			
MBS	PMP	VL0006	MLT MBS PMP0006 NGI	22																			
MBS	PMP	VL0612	MLT MBS PMP0612 NGI	135																			
MBS	PS	VL1218	MLT MBS PS 1824 NGI*	2																			
MBS	PS	VL1824	MLT MBS PS 1824 NGI*	1																			
MBS	PS	VL2440	MLT MBS PS 1824 NGI*	1																			
MBS	INACTIVE	VL0006	MLT MBS INA0006 NGI	107																			
MBS	INACTIVE	VL0612	MLT MBS INA0612 NGI	86																			
MBS	INACTIVE	VL1218	MLT MBS INA1218 NGI	4																			
MBS	INACTIVE	VL1824	MLT MBS INA1824 NGI	9																			
MBS	INACTIVE	VL2440	MLT MBS INA2440 NGI	4																			
MLT Total				938																			

Based on indicator values for 2018 and trends over 2013-2018 and according to the criteria in the Commission guidelines, the majority of fleet segments appear to be out of balance with fishing opportunities. Exceptions exist for fleet segments HOK1824 NGI, MG0612 NGI, MG1824 NGI and PS1824 NGI, where fleets appear to be in balance for CR/BER, RoFTA, ROI and VUR. The biological indicators suggest that the HOK1218 NGI, HOK1824 NGI and PGP 0612 NGI are out of balance. Increasing trends appear in CR/BER, RoFTA and ROI for fleet segments HOK1824 NGI, MG0612 NGI and PMP0612 NGI.

These observations are largely in line with the assessment of balance in the Member States' fleet report submitted in 2020.

Comparison of indicator values

A comparison Indicator values_computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

SHI values reported in the framework of EWG 20-11 for fleets MLT MBS DTS2440 NGI, MLT MBS HOK1218 NGI, MLT MBS MGO0612 NGI, MLT MBS MGO1824 NGI, MLT MBS PGP0006 NGI, MLT MBS PGP0612 NGI, MLT MBS PMP0006 NGI, MLT MBS PMP0612 NGI and MLT MBS PS 1824 NGI were calculated where 40% or more of the fleet segment's annual landed value came from assessed stocks (an indication that the SHI value is representative). The SHI values report in the MS annual fleet report, indicated that these fleets were "out of balance", except for the fleet MLT MBS PS 1824 NGI that was found to be "in balance".

For the four fleet segments for which SHI indicator may be considered meaningful to assess balance or imbalance, the trend for the period 2012/2017 shows that there are two fleet segments showing no trend (HOK VL1218 and HOK VL1824), one fleet segment which shows an increasing trend (PMP VL0006) and two fleet segments which show a decreasing trend (MGO VL0612 and PMP VL0612). The 2017 status as per COM guidelines indicate that the PS VL1824 fleet segment is in balance, whilst the HOK VL1218, HOK VL1824 and PGP VL0612 fleet segments are out of balance.

Stocks at Risk Indicator (SAR)

The MS annual fleet report did not provide information for SAR.

As highlighted in STECF 16-18 report, and again STECF 19-03, 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.

STECF-19-13 also concluded that SAR indicator is not available for Malta for 2012-2017 (based on conclusion of STECF 18-14).

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

The comparison between CR/BER reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values.

The only exception was the fleet MLT MBS HOK1824 NGI for which the status in the EWG 20-11 estimation was "in balance" and for which the MS annual report indicated "out of balance".

In the year 2018 the national fleet has been economically sufficient, in fact as a whole the CR/BER ratio of the fleet is above 1, this is derived by the fact that the majority of the segments have shown an indicator between 0 and above 1. During this reference year a number of segments have made improvements over the previous year, at the same time there have been segments which have shown deterioration in their economic performance. In 2018, out of 10 fleet segments three were balanced, four were unprofitable and the remaining three were in a loss-making position.

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

The comparison between ROI reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values.

The exceptions were the fleets MLT MBS HOK1218 NGI, MLT MBS HOK1824 NGI and MLT MBS PMP0612 NGI, for which the status in the EWG 20-11 estimation was "in balance" and for which the MS annual report indicated "out of balance".

Overall, in 2018 the ROI trend of the entire fleet showed signs of slight decline when compared to the trend as the fleet's ROI indicator decrease slightly.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

The comparison between VUR reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed same outputs for all values.

The trend analysed for the period 2012-2017, using the slope equation and a 5% threshold to indicate significance indicate that there is no trend for HOK VL 1218, HOK VL1824 and MGO VL0612, whilst a decreasing trend is observed for PMP VL0006 and PMP VL0612. The results indicate that, based on the 2014 guidelines, the status of most of the Maltese fleet segments are in balance.

Inactive Fleet Indicator

Inactive vessels have been reported as number, GT and kW in the MS annual fleet report. The comparison between inactive fleet indicator reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed same outputs for all values.

The trend analysed for the period 2012-2017, using the slope equation and a 5% threshold to indicate significance, indicate that for there is no trend in terms of number of vessels, but an increasing trend in terms of gross tonnage and engine power.

Assessment of fleet report

The fleet report submitted by Malta provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments.

The fleet report submitted by Malta is in line with the Commission guidelines COM(2014)545.

A new action plan for those fleet segments that overtime appear out of balance is proposed.

Measures in action plans

The new action plan was compiled by taking into consideration the trend analysis of the economic performance of the Maltese fishing fleet and the trend analysis of the two economic indicators for the years 2008-2017. This consideration is suggested in the 2014 guidelines (COM (2014) 545 Final), whereby it states that the Common Fisheries Policy refers to balance (and imbalance) over time rather than one single year. Hence Malta considered several years rather than a single year when compiled the action plan. This action plan is presented in the following Table.

Timeframe	Segments addressed	Measure	Action	Indicator
2017-2020	All vessels <12m	Monitoring of landings	Weighing of fishery products on the Automatic weighing and Labelling machines	All catches recorded
	All vessels <10m	Monitoring of activity	Sampling plan	All landings of vessels <10m monitored through sampling and

				sales notes
	Vessels ≥ 6m and <12m	Monitoring of activity	The vessels will be equipped with a monitoring system to detect fishing activity leading to better monitoring.	All fishing activity
	DFN	Conservation	Prohibition of fishing in bays and creeks from 15 February to 30 August with all types of nets.	Increase in biomass by 2020
	FPO	Conservation	Closed season for the months of April and May	Increase in biomass by 2020
Ongoing	Entire fleet	Analysis of the market to identify any structural deficiencies or market forces resulting in a low average price at first sale for fishery products	This analysis will be assisted by the implementation of an innovative traceability system being implemented at national level and co-funded by the EU covering primary production up to the first sale as it is expected to yield better information on the fishery products caught and marketed for the first time	Identification of measures to achieve better prices at first sale to help generate more income for the fishers

The proposed action plan is largely a statement of intent to improve monitoring activities that are not time-bound. The objectives and targets are unclear and the proposed conservation measures for DFN and FPO segments aimed at increasing biomass by 2020 are unrealistic.

In the absence of clearly stated objectives and targets and more detail of the specific measures to be implemented, the Expert group is unable to comment on the likely effects of such measures.

3.6.16 Netherlands (NLD)

Overview of indicator findings

Area 27

There were 31 fleet segments in 2018, of which 25 were active. Of the 25 active segments, landings and economic data were provided aggregated for 11 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 25 active fleet segments in 2018, SHI indicator values were available for 11.

According to the criteria in the 2014 Commission 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 6 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 67.69% of the total value of the landings in 2018 provided by MS, and were as follows:

- 3 segments may be *in balance* with their fishing opportunities;
- 3 segments may be *out of balance* with their fishing opportunities.

Trends were available for the 6 fleet segments:

- 3 segments displayed a decreasing trend,
- 3 segments displayed no clear trend.

Stocks-at-Risk Indicator (SAR)

SAR indicator was available for 5 fleet segments in 2018. For all 5 fleet segments, one or more stocks-at-risk were detected:

- 3 segments with 2 stocks-at-risk,
- 2 segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments			7	4

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/Fmsy is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	7	2	1	1

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

RoI was calculated for 11 segments:

- 9 segments were *in balance* with their fishing opportunities,
- 1 segment was *out of balance* with their fishing opportunities,
- 1 segment was *not sufficiently profitable*.

Trends were calculated for 11 segments:

- 8 segments displayed an increasing trend,
- 3 segments displayed a decreasing trend.

RoFTA was calculated for 11 segments:

- 10 segments were *in balance* with their fishing opportunities,
- 1 segment was *out of balance* with their fishing opportunities.

Trends were calculated for 11 segments:

- 8 segments displayed an increasing trend,
- 3 segments displayed a decreasing trend.

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

CR/BER was calculated for 11 segments:

- 10 segments were *in balance* with their fishing opportunities,
- 1 segment was *out of balance* with their fishing opportunities,

Trends were calculated for 11 segments:

- 7 segments displayed an increasing trend,
- 2 segments displayed a decreasing trend
- 2 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

VUR was calculated for 11 segments:

- 5 segments were *in balance* with their fishing opportunities,
- 6 segments were *out of balance* with their fishing opportunities.

Trends were calculated for 11 segments.

- 1 segment displayed a decreasing trend.
- 10 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, 6 vessel length classes had inactive vessels (VL0010, VL1012, VL1218, VL1824, VL2440 and VL40XX*)*.

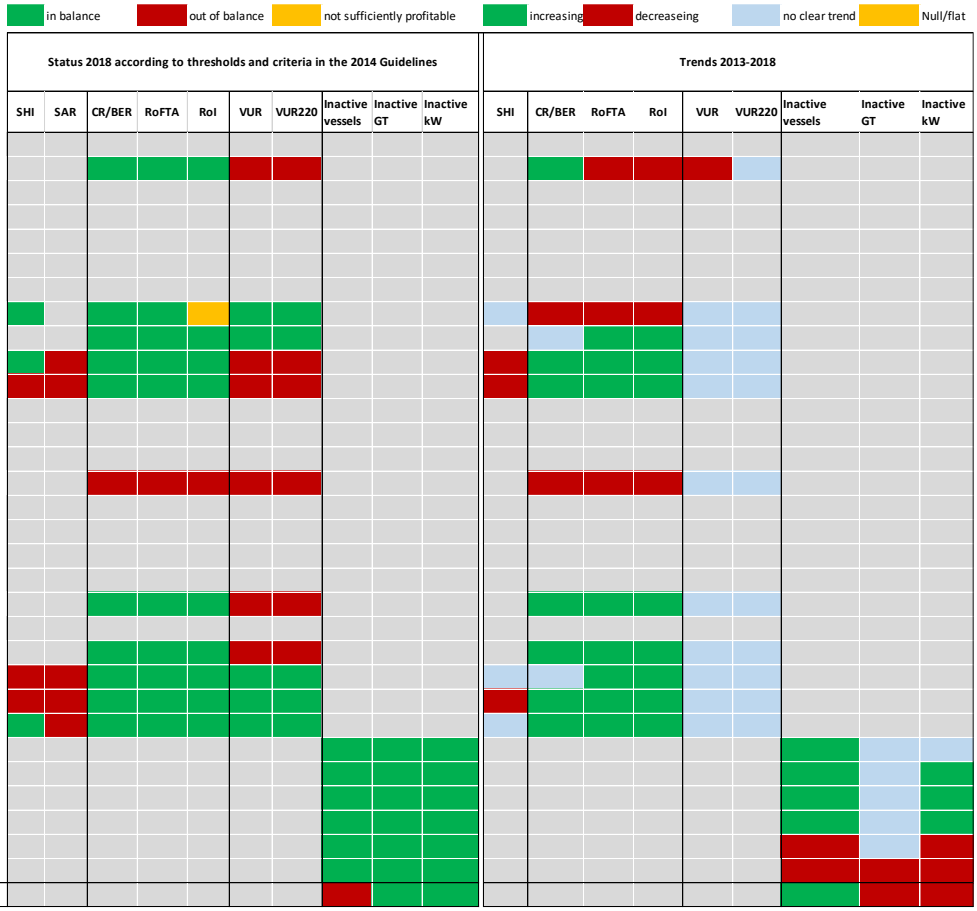
The Dutch inactive fleet accounted for 27.6% of the total number of vessels, 3.9% of the total GT and 7.7% of the total kW. At the national level, inactive vessels accounted for more than 20% of the fleet in vessel number in 2018 and thus, was *out of balance* and displayed an increasing trend.

The segment with the highest level of inactivity is the VL0010 segment with 19% of the number of vessels.

By vessel length group:

- All segments were *in balance* for all 3 categories (#, GT and kW),
- Trends could be calculated for all segments and show an increasing trend for the small-mid length groups and a decreasing trend for the larger two length groups.

Synthesis of indicators and trends



SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
NAO	DFN	VL1218	NLD NAO DFN1824 NGI*	5																			
NAO	DFN	VL1824	NLD NAO DFN1824 NGI*	1																			
NAO	FPO	VL1218	NLD NAO DFN1824 NGI*	3																			
NAO	FPO	VL1824	NLD NAO DFN1824 NGI*	1																			
NAO	MGO	VL1824	NLD NAO DFN1824 NGI*	4																			
NAO	MGP	VL1824	NLD NAO DFN1824 NGI*	1																			
NAO	TM	VL1824	NLD NAO DFN1824 NGI*	2																			
NAO	DTS	VL1824	NLD NAO DTS1824 NGI*	5																			
NAO	DTS	VL2440	NLD NAO DTS2440 NGI*	28																			
NAO	PG	VL0010	NLD NAO PG 0010 NGI*	157																			
NAO	PG	VL1012	NLD NAO PG 1012 NGI*	18																			
NAO	DTS	VL0010	NLD NAO TBB0010 NGI*	8																			
NAO	DTS	VL1012	NLD NAO TBB0010 NGI*	2																			
NAO	PS	VL0010	NLD NAO TBB0010 NGI*	2																			
NAO	TBB	VL0010	NLD NAO TBB0010 NGI*	5																			
NAO	TBB	VL1012	NLD NAO TBB0010 NGI*	1																			
NAO	DRB	VL40XX	NLD NAO TBB1218 NGI*	4																			
NAO	DRB	VL2440	NLD NAO TBB1218 NGI*	3																			
NAO	DTS	VL1218	NLD NAO TBB1218 NGI*	1																			
NAO	TBB	VL1218	NLD NAO TBB1218 NGI*	11																			
NAO	TM	VL1218	NLD NAO TBB1218 NGI*	4																			
NAO	TBB	VL1824	NLD NAO TBB1824 NGI*	161																			
NAO	TBB	VL2440	NLD NAO TBB2440 NGI*	28																			
NAO	TBB	VL40XX	NLD NAO TBB40XX NGI*	60																			
NAO	TM	VL40XX	NLD NAO TM 40XX NGI*	7																			
NAO	INACTIVE	VL0010	NLD NAO INA0010 NGI*	137																			
NAO	INACTIVE	VL1012	NLD NAO INA1012 NGI*	12																			
NAO	INACTIVE	VL1218	NLD NAO INA1218 NGI*	16																			
NAO	INACTIVE	VL1824	NLD NAO INA1824 NGI*	13																			
NAO	INACTIVE	VL2440	NLD NAO INA2440 NGI*	17																			
NAO	INACTIVE	VL40XX	NLD NAO INA40XX NGI*	4																			
NLD Total				721																			

Based on indicator values for 2018 and trends over 2013-2018 and according to the criteria in the Commission guidelines, the majority of fleet segments appear to in balance with fishing opportunities. The exception is the TBB 0010 NGI segment for which all values indicate an imbalance. The biological indicators suggest that the PG 1012, TBB 2440, and TBB40XX NGI segment may also be out of balance, and the trend in SHI shows a worsening situation (increasing trend in SHI).

These observations are largely in line with the assessment of balance in the Member States' fleet report submitted in 2020 although no action plan was proposed for unbalanced segments.

Comparison of indicator values

A comparison Indicator values_computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

In the MS annual fleet report the SHI has been provided for the reference year 2018.

The comparison between biological indicators reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs in terms of fleet segment status for SHI for most values.

The observed trends in the SHI in the fleet report were similar to those estimated by the Expert group and indicate an improving situation (decreasing trend for 4 segments and no clear trend for 1 segment.

Stocks at Risk Indicator (SAR)

In the MS annual fleet report the SAR has been provided for the reference year 2018.

The comparison between biological indicators reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed some discrepancies in the value of the SAR for 4 fleet segments. EWG 20-11 estimates 3 fleet segments to be out of balance (PG 0010, PG 1012, TBB40XX) and for these segments the MS does not provide estimates for the SAR indicator. Conversely, the MS fleet report provides 1 SAR indicator for fleet segment DTS2440 indicating it is out of balance whereas, no SAR value was computed bythe Expert group.

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

The comparison between CR/BER reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for all values.

No trend assessment was presented by the MS.

Trends based on EWG 20-11 calculations for the 11 segments were as follows:

- 7 segments displayed an increasing trend,
- 2 segments displayed a decreasing trend,
- 2 segments displayed no trend (or no trend could be calculated).

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

The comparison between ROI reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values. Minor discrepancy in values can be observed at 5 fleet segments. Differences in values do not affect the final evaluations on balance/imbalance by fleet segment.

No trend assessment was presented by the MS.

Trends based on EWG 20-11 calculations for the 11 segments were as follows:

- 8 segments displayed an increasing trend,
- 3 segments displayed a decreasing trend.

Net profit margin

The comparison between NPM reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values. Minor discrepancy in values can be observed at 4 fleet segments. Differences in values do not affect the final evaluations on balance/imbalance by fleet segment.

No trend assessment was presented by the MS.

Trends based on EWG 20-11 calculations for the 11 segments were as follows:

- 7 segments displayed an increasing trend,

- 3 segments displayed a decreasing trend,
- 1 segment displayed no trend (or no trend could be calculated).

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

A discrepancy has been observed in the calculation of VUR between the MS annual fleet report and the ones estimated in the framework of the EWG 20-11.

In the MS annual fleet report the VUR Indicator was calculated as the ratio between days at sea and maximum days at sea for each length group and gear type. A table reporting the maximum observed days at sea per fleet segment was included in Annex 4 of the MS annual fleet report.

EWG 20-11 reported the VUR220 because the data reported by the MS under DCF did not provide information on the maximum observed days at sea per fleet segment and the theoretical maximum number of days was used for the calculation.

No trend assessment was presented by the MS.

Trends based on EWG 20-11 calculations based on VUR220 for the 11 segments were as follows:

- 11 segments displayed no trend (or no trend could be calculated).

Inactive Fleet Indicator

Inactive vessels have been reported as number, GT and kW in the MS annual fleet report, and they revealed similar outputs in term of fleet segment as the ones estimated in the framework of the EWG 20-11 dataset.

Assessment of fleet report

The fleet report submitted by Netherland does not provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments. The fleet report submitted by the Netherland provides calculation of indicators but the analysis of balance between fleet capacity and fishing opportunity of fleet segments is missing. Furthermore, all descriptive information about MS fishing fleet segments and management systems are missing (Commission guidelines COM (2014)545 – appendix 1).

The fleet report submitted by Netherland is not completely in line with the Commission guidelines COM (2014)545.

The current Netherlands management system is considered by the MS to be well functioning in order to secure a balance between fishing opportunities and capacity. Therefore, there are no action plans proposed.

Measures in action plans

No new or revised action plans were proposed.

3.6.17 Poland (POL)

Area 27

There were 22 fleet segments in 2018, of which 18 were active. Of the 18 active segments, landings and economic data were provided aggregated by 7 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 18 fleet segments active in 2018, SHI indicator values were available for 7.

According to the criteria in the 2014 Commission 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 2 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 54.39% of the total value of the landings in 2018 provided by MS, and were as follows:

- 2 fleet segments may *be out of balance* with their fishing opportunities;

Trends were available for the 2 fleet segments:

- 2 fleet segments displayed an increasing trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 6 fleet segments in 2018:

- 6 fleet segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the 7 fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments				7

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	4	1		2

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

RoI was not calculated.

RoFTA was calculated for 7 segments:

- 3 segments were *in balance* with their fishing opportunities,
- 3 segments were *out of balance* with their fishing opportunities,
- 1 segment was *not sufficiently profitable*.

Trends were calculated for 7 segments:

- 3 segments displayed an increasing trend,
- 4 segments displayed a decreasing trend.

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

CR/BER was calculated for 7 segments:

- 3 segments were *in balance* with their fishing opportunities,
- 4 segments were *out of balance* with their fishing opportunities.

Trends were calculated for 7 segments:

- 4 segments displayed an increasing trend,
- 3 segments displayed a decreasing trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

VUR was calculated for 11 segments:

- 4 segments were *in balance* with their fishing opportunities,
- 7 segments were *out of balance* with their fishing opportunities,

Trends could be calculated for 7 segments:

- All 7 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, 4 vessel length segments had inactive vessels (VL0010, VL1012, VL1218 and VL1824).

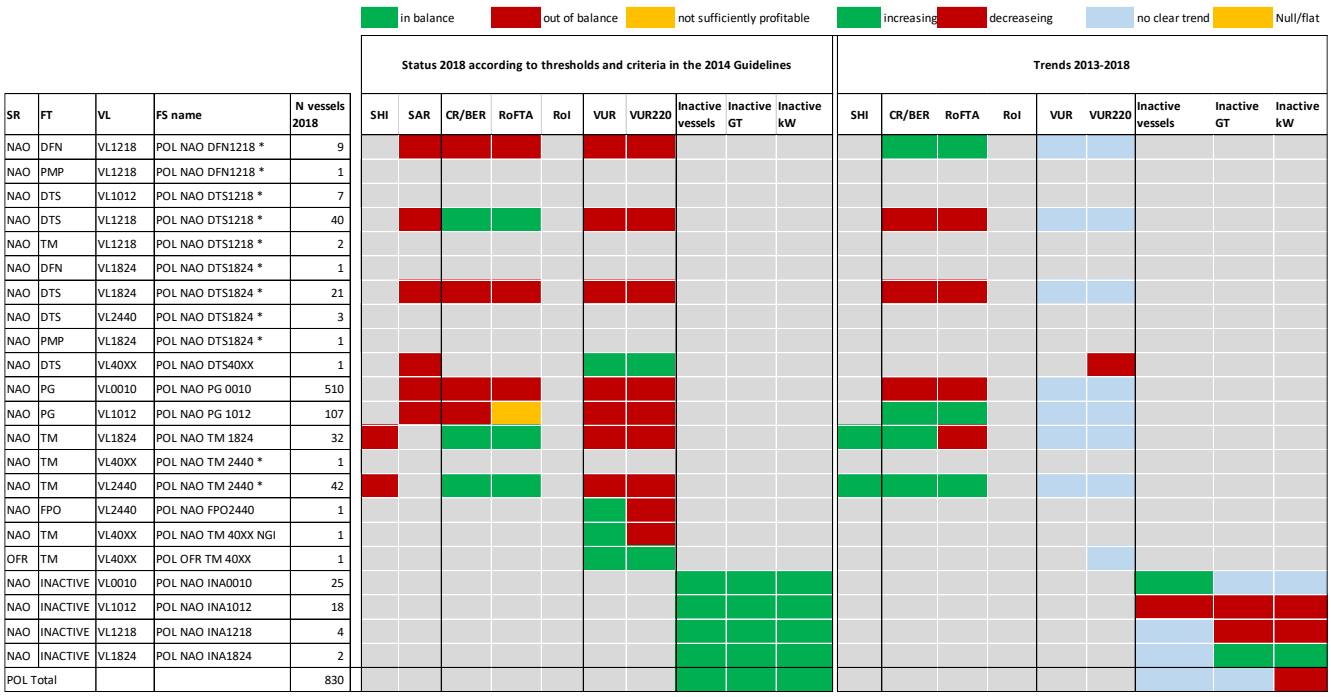
The Polish inactive fleet accounted for 5.9% of the total number of vessels, 1.1% of the total GT and 2.4% of the total kW. At the national level, inactive vessels accounted for less than 20% of the fleet in vessel number and thus, was *in balance* but displayed an increasing trend.

The segment with the highest level of inactivity is the VL0010 segment at 25.6% in terms of number of vessels and 4.4% in kW.

By vessel length group:

- All segments were *in balance* for all 3 categories (#, GT and kW),
- 1 segment displayed an increasing trend in number of vessels, 1 segment displayed a decreasing trend and 2 segments displayed no clear trend.

Synthesis of indicators and trends



SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
NAO	DFN	VL1218	POL NAO DFN1218 *	9																			
NAO	PMP	VL1218	POL NAO DFN1218 *	1																			
NAO	DTS	VL1012	POL NAO DTS1218 *	7																			
NAO	DTS	VL1218	POL NAO DTS1218 *	40																			
NAO	TM	VL1218	POL NAO DTS1218 *	2																			
NAO	DFN	VL1824	POL NAO DTS1824 *	1																			
NAO	DTS	VL1824	POL NAO DTS1824 *	21																			
NAO	DTS	VL2440	POL NAO DTS1824 *	3																			
NAO	PMP	VL1824	POL NAO DTS1824 *	1																			
NAO	DTS	VL40XX	POL NAO DTS40XX	1																			
NAO	PG	VL0010	POL NAO PG 0010	510																			
NAO	PG	VL1012	POL NAO PG 1012	107																			
NAO	TM	VL1824	POL NAO TM 1824	32																			
NAO	TM	VL40XX	POL NAO TM 2440 *	1																			
NAO	TM	VL2440	POL NAO TM 2440 *	42																			
NAO	FPO	VL2440	POL NAO FPO2440	1																			
NAO	TM	VL40XX	POL NAO TM 40XX NGI	1																			
OFR	TM	VL40XX	POL OFR TM 40XX	1																			
NAO	INACTIVE	VL0010	POL NAO INA0010	25																			
NAO	INACTIVE	VL1012	POL NAO INA1012	18																			
NAO	INACTIVE	VL1218	POL NAO INA1218	4																			
NAO	INACTIVE	VL1824	POL NAO INA1824	2																			
POL Total				830																			

Based on indicator values for 2018 and trends over 2013-2018 and according to the criteria in the Commission guidelines, the majority of fleet segments appear to be out of balance with fishing opportunities. In particular, the segments DTS VL1824 and PG VL0010 stand out as the economic indicators imply a worsening situation (decreasing trend) Segments PG VL1012 and DFN VL1218 could be also considered as out of balance according to the SAR, ROI, CR/BER, and VUR values. Segments TM VL1824 and TM VL2440 indicate some potential imbalance according to the SHI value for 2018 although the trend is indicating an improving situation both for the SHI and the good economic performance and increasing trend in CR/BER.

These observations are largely in line with the assessment of balance in the Member States' fleet report submitted in 2020 and an action plan is proposed for unbalanced segments.

Comparison of indicator values

A comparison Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

In the Fleet Report submitted by Poland SHI is presented for 2017 – 2019.

The comparison between SHI values reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 was made for 2018 in view of data comparability and reveals some minor discrepancies. Nevertheless, the outputs in terms of fleet segments status are similar.

The trend comparison for the segments (VL1824 TM and VL2440 TM) also reveals similar outputs.

Stocks at Risk Indicator (SAR)

In the Fleet Report submitted by Poland SAR is presented for 2017 – 2019.

A discrepancy has been observed between SAR for 2018 reported in the MS annual fleet report and those estimated in the framework of EWG 20-11. Nevertheless, the outputs in terms of fleet segments status are similar.

In the absence of trend of SAR in the framework of EWG 20-11 a comparison between trends is not possible.

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

In the Fleet Report submitted by Poland CR/BER is presented for 2016 – 2018.

A discrepancy has been observed between CR/BER reported in the MS annual fleet report and those estimated in the framework of EWG 20-11. Nevertheless, the outputs in terms of fleet segments status are similar with the exception of fleet segment PG VL1012, for which the status in the EWG 20-11 estimation was "out of balance" and the MS annual report indicated "in balance".

The trend outputs are the same except for segments DFN VL1012 (estimated trend by EWG 20-11 is "increasing" while in the MS annual report "decreasing") DTS VL 1218 (estimated trend by EWG 20-11 is "decreasing" while in the MS annual report "increasing").

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

In the Fleet Report submitted by Poland RoFTA is presented for 2016 – 2018.

The comparison between RoFTA reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed no differences in the indicator values and similar outputs for the most values. The only exception is fleet segment PG VL1012, for which the status in the EWG 20-11 estimation was "not sufficiently profitable" and the MS annual report indicated "in balance". The difference output observed is due to the value of the 5-year average low-risk long term interest rate used as a threshold.

The trend outputs are the same except for segments DFN VL1012 (estimated trend by EWG 20-11 is "increasing" while in the MS annual report "decreasing") DTS VL 1218 (estimated trend by EWG 20-11 is "decreasing" while in the MS annual report "increasing").

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

A discrepancy has been observed in the calculation of VUR between the MS annual fleet report and the ones estimated in the framework of the EWG 20-11.

Nevertheless, the outputs in terms of fleet segments status are similar with the exception of fleet segment TM VL2440.

In the absence of trend of VUR in the framework of EWG 20-11 a comparison between trends is not possible.

Inactive Fleet Indicator

Inactive vessels have been reported as number, GT and kW in the MS annual fleet report. However, a discrepancy has been observed in the indicator between the MS annual fleet report and the ones estimated in the framework of the EWG 20-11. EWG 20-11 suggests this is due to the different method of calculation (Poland presented the indicator as a proportion of inactive vessels of the fleet segment instead of the total fleet).

Assessment of fleet report

The fleet report submitted by Poland provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments with the exception of distant water fleet (vessels over 40m fishing outside Baltic Sea).

Analysis and evaluation of the balance between fishing capacity and fishing opportunities are provided in the Poland fleet report by fleet segment for three consecutive years' in line with the Commission guidelines COM(2014)545, as follows:

- biological indicators (SHI and SAR) – for 2017 - 2019;
- economic indicators (ROI and CR/BER) – for 2016 – 2018;
- technical indicators (VUR and Inactive Vessel indicator) – for 2017 – 2019.

In the Fleet Report submitted by Poland, it is noted that based on the given status of marine biological resources and the fishing opportunities available for Poland in the Baltic Sea the existing fleet structure showing that there is a temporary imbalance between fishing capacity and available fish stocks.

The latest assessments of the biological, technical and economic indicators presented in Chapter VIII, Section F of the Poland report also shows that individual segments of the Polish Baltic Sea fleet have still not adjusted effectively to available fishing opportunities. For the fleet segments with identified structural overcapacity, an action plan is presented in pursuant to Article 22(4) of Regulation (EU) No 1380/2013.

Measures in action plans

EWG 20-11 notes that the provided Action plan is similar to the previous year Action plan with one new segment additionally included (VL2440 TM - pelagic trawlers between 24 m and 40 m in overall length). For the imbalanced segments, the Polish action plan proposes aid for a temporary (6 months) cessation of fishing activities in accordance with Regulation No 508/2014.

In its fleet report Poland has concluded that structural overcapacity exists in its some the fishing fleet segments and relevant action plan is provided. Targets, tools and timeframes for the Action plan are clearly stated.

However, with the data and information provided in the fleet report submitted by Poland and the associated action plan the EWG 20-11 cannot determine whether the measures proposed will have any influence on the balance between capacity and fishing opportunities.

3.6.18 Portugal (PRT)

Overview of indicator findings

There were 76 fleet segments in 2018, of which 60 were active. Of the 60 active segments, landings and economic data were provided aggregated by 53 fleet segments.

Area 27

Sustainable Harvest Indicator (SHI)

Out of 50 active fleet segments in 2018 in Area27, SHI indicator values were available for 45.

According to the criteria in the 2014 Commission guidelines, the SHI indicator values for 36 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 9 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 34.27% of the total value of the landings in 2018 provided by MS, and were as follows:

- 3 fleet segments may be *in balance* with their fishing opportunities;
- 6 fleet segments may be *out of balance* with their fishing opportunities.

Trends could be calculated for 8 segments:

- 5 fleet segments displayed a decreasing trend,
- 3 fleet segments displayed no clear trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 14 fleet segments in 2018. For all 14 segments, one or more stocks-at-risk were detected:

- 1 fleet segment with 6 stocks-at-risk,
- 2 fleet segments with 2 stocks-at-risk,
- 11 fleet segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the 44 fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments		24	15	5

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	37	7	1	

OFR

Sustainable Harvest Indicator (SHI)

Out of 8 fleet segments active in 2018, landings in value have been provided aggregated in 2 fleet segments and SHI indicator values were available for 2.

According to the criteria in the 2014 Commission guidelines, the SHI indicator values for all 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 values were not calculated for any of the segments.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the 2 fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments		2		

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	2			

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

RoI was not calculated.

RoFTA was calculated for 53 segments:

- 48 segments were *in balance* with their fishing opportunities,
- 5 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 49 segments:

- 26 segments displayed an increasing trend.
- 22 segments displayed a decreasing trend,
- 1 segment displayed no clear trend.

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

CR/BER was calculated for 53 segments:

- 48 segments were *in balance* with their fishing opportunities,
- 5 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 49 segments:

- 22 segments displayed an increasing trend,
- 21 segments displayed a decreasing trend,
- 6 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

VUR was calculated for 53 segments:

- 39 segments were *in balance* with their fishing opportunities,
- 14 segments were *out of balance* with their fishing opportunities,

Trends could be calculated for 47 segments:

- 13 segments displayed an increasing trend,
- 34 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, 5 vessel length segments had inactive vessels (VL0010, VL1012, VL1218, VL1824 and VL40XX*)*. Data were provided for the mainland (NGI) Madeira (P2) and Azores (P3) fleets. Only the mainland fleet contained inactive vessels in the VL40XX segment.

The Portuguese inactive fleet accounted for 53.1% of the total number of vessels, 20.9% of the total GT and 23.0% of the total kW. At the national level, inactive vessels accounted for more than 20% of the fleet in all categories (#, GT and kW), and thus, was *out of balance* and displayed an increasing trend for number of vessels but decreasing trends for GT and kW.

By vessel length group:

- 1 segment was *out of balance* in terms of number of vessels and displayed and increasing trend,
- All other segments were *in balance* for all 3 categories (#, GT and kW).

Synthesis of indicators and trends

Based on the combined analysis of the results of the vessel use, biological sustainability and economic indicators, the MS concludes in the Fleet Repot that the Portuguese fleet is in balance with its fishing opportunities in the case of all fleet segments.

The Fleet Report provides information about a several management measures carried out by Portugal related to the establishment of the licensing system. An Action plan is not provided in the report due to the Portuguese fleet being in balance with its fishing opportunities.

Based on the STECF indicator estimations the economic indicators indicate that the majority of fleet segments in the Portuguese fishery are profitable. A conclusion about the balance or imbalance with regards to the biological indicators is not possible, due to

the low number of available and meaningful values (SHI and SAR) for the Portuguese fleet segments.

The STECF economic indicators support the MS conclusion while the biological indicators do not support or contradict this conclusion due to the low numbers of segments for which these indicators are available.

Despite the differences in the technical indicator values in the Fleet Report and those computed by the EWG, the trends are similar. The technical indicators in the Fleet Report were deemed by the Member State not to be representative of the true activity of the fleet segments.

The EWG observations are largely in line with the assessment of balance in the Member State’s fleet report submitted in 2020.

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

SR	FT	VL	FS name	N vessels 2018	Status 2018 according to thresholds and criteria in the 2014 Guidelines									Trends 2013-2018								
					SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
MBS	FPO	VL2440	PRT MBS FPO2440 NGI	1																		
NAO	DFN	VL0010	PRT NAO DFN0010 NGI	400																		
NAO	DFN	VL0010	PRT NAO DFN0010 P3	45																		
NAO	DFN	VL1012	PRT NAO DFN1012 NGI	19																		
NAO	DFN	VL1218	PRT NAO DFN1218 NGI	53																		
NAO	DFN	VL1824	PRT NAO DFN1824 NGI	24																		
NAO	DRB	VL0010	PRT NAO DRB0010 NGI	39																		
NAO	DRB	VL1012	PRT NAO DRB1012 NGI	22																		
NAO	DRB	VL1218	PRT NAO DRB1218 NGI	13																		
NAO	DTS	VL0010	PRT NAO DTS0010 NGI	4																		
NAO	DTS	VL1012	PRT NAO DTS1012 NGI	4																		
NAO	DTS	VL1218	PRT NAO DTS1218 NGI	8																		
NAO	DTS	VL1824	PRT NAO DTS1824 NGI	8																		
NAO	DTS	VL2440	PRT NAO DTS2440 NGI	58																		
NAO	DTS	VL40XX	PRT NAO DTS40XX IWE	9																		
NAO	FPO	VL0010	PRT NAO FPO0010 NGI	319																		
NAO	FPO	VL1012	PRT NAO FPO1012 NGI	57																		
NAO	FPO	VL1218	PRT NAO FPO1218 NGI*	60																		
NAO	FPO	VL1824	PRT NAO FPO1218 NGI*	6																		
NAO	HOK	VL0010	PRT NAO HOK0010 NGI	131																		
NAO	HOK	VL0010	PRT NAO HOK0010 P2 *	48																		
NAO	HOK	VL1012	PRT NAO HOK0010 P2 *	5																		
NAO	HOK	VL0010	PRT NAO HOK0010 P3	317																		
NAO	HOK	VL1012	PRT NAO HOK1012 NGI	5																		
NAO	HOK	VL1012	PRT NAO HOK1012 P3	64																		
NAO	HOK	VL1218	PRT NAO HOK1218 NGI	22																		
NAO	HOK	VL1218	PRT NAO HOK1218 P2	17																		
NAO	HOK	VL1218	PRT NAO HOK1218 P3	38																		
NAO	HOK	VL1824	PRT NAO HOK1824 NGI	17																		
NAO	HOK	VL1824	PRT NAO HOK1824 P2	3																		
NAO	HOK	VL2440	PRT NAO HOK2440 NGI	17																		
NAO	HOK	VL2440	PRT NAO HOK2440 P2	5																		
NAO	HOK	VL1824	PRT NAO HOK2440 P3 *	4																		
NAO	HOK	VL2440	PRT NAO HOK2440 P3 *	21																		
NAO	MGO	VL0010	PRT NAO MGO0010 NGI	30																		
NAO	MGO	VL1012	PRT NAO MGO1012 NGI	9																		
NAO	MGP	VL0010	PRT NAO MGP0010 P2	6																		
NAO	MGP	VL1824	PRT NAO MGP1824 P2 *	3																		
NAO	PGP	VL0010	PRT NAO PGP0010 NGI	1,456																		
NAO	PGP	VL0010	PRT NAO PGP0010 P3 *	9																		
NAO	PGP	VL1012	PRT NAO PGP0010 P3 *	1																		
NAO	PGP	VL1218	PRT NAO PGP0010 P3 *	1																		
NAO	PGP	VL1012	PRT NAO PGP1012 NGI	8																		
NAO	PGP	VL1218	PRT NAO PGP1218 NGI	29																		
NAO	PGP	VL1824	PRT NAO PGP1824 NGI	4																		
NAO	PMP	VL0010	PRT NAO PMP0010 NGI	42																		
NAO	PS	VL0010	PRT NAO PS 0010 NGI	21																		
NAO	PS	VL0010	PRT NAO PS 0010 P3	20																		
NAO	PS	VL1012	PRT NAO PS 1012 NGI	28																		
NAO	PS	VL1012	PRT NAO PS 1012 P3 *	9																		
NAO	PS	VL1218	PRT NAO PS 1218 NGI	35																		
NAO	PS	VL1218	PRT NAO PS 1218 P3	4																		
NAO	PS	VL1824	PRT NAO PS 1824 NGI	53																		
NAO	PS	VL2440	PRT NAO PS 2440 NGI	21																		
NAO	TBB	VL0010	PRT NAO TBB0010 NGI	14																		
NAO	TBB	VL1012	PRT NAO TBB1012 NGI*	9																		
NAO	TBB	VL1218	PRT NAO TBB1012 NGI*	1																		
OFR	HOK	VL2440	PRT OFR HOK2440 IWE*	13																		
OFR	DTS	VL40XX	PRT OFR HOK40XX IWE*	1																		
OFR	HOK	VL40XX	PRT OFR HOK40XX IWE*	5																		
NAO	INACTIVE	VL0010	PRT NAO INA0010 NGI	3,469																		
NAO	INACTIVE	VL0010	PRT NAO INA0010 P2	320																		
NAO	INACTIVE	VL0010	PRT NAO INA0010 P3	147																		
NAO	INACTIVE	VL1012	PRT NAO INA1012 NGI	51																		
NAO	INACTIVE	VL1012	PRT NAO INA1012 P2	1																		
NAO	INACTIVE	VL1012	PRT NAO INA1012 P3	23																		
NAO	INACTIVE	VL1218	PRT NAO INA1218 NGI	78																		
NAO	INACTIVE	VL1218	PRT NAO INA1218 P2	4																		
NAO	INACTIVE	VL1218	PRT NAO INA1218 P3	37																		
NAO	INACTIVE	VL1824	PRT NAO INA1824 NGI	25																		
NAO	INACTIVE	VL1824	PRT NAO INA1824 P2	6																		
NAO	INACTIVE	VL1824	PRT NAO INA1824 P3	4																		
NAO	INACTIVE	VL2440	PRT NAO INA2440 NGI	12																		
NAO	INACTIVE	VL2440	PRT NAO INA2440 P2	5																		
NAO	INACTIVE	VL2440	PRT NAO INA2440 P3	7																		
NAO	INACTIVE	VL40XX	PRT NAO INA40XX NGI	3																		
PRT Total				7,887																		

Sustainable Harvest Indicator (SHI)

In the Portuguese annual fleet report the SHI-values have been provided for the reference year 2018 subdivided into the mainland fleet, the Azores and the Madeiran fleets. SHI-values have been presented for the Madeiran fleet segments only. Differences exist in the SHI values for segments that could be compared although both the values in the fleet report and those computed by the expert group each indicated imbalance. However, such values are not considered reliable because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

Indicator trends were not provided in the fleet report. No comparison was possible.

Stocks at Risk Indicator (SAR)

In the Portuguese annual fleet report the SAR has been provided for the reference year 2018 subdivided into the mainland fleet, the Azores and the Madeiran fleets. SAR-values have been presented for the Madeiran fleet segments only. Due to this subdivision, a comparison of this indicator with EWG20-11 indicator values was not possible.

Indicator trends were not provided in the fleet report. No comparison was possible.

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

In the Portuguese annual fleet report the CR/BER-values have been provided for the reference years 2015-2019. The CR/BER ratio was estimated for 38 segments subdivided into the mainland fleet, the Azores and the Madeiran fleets.

There were 53 segments estimated for the EWG 20-11 (15 segments more than in the MS Fleet Report). A comparison between indicator values in MS Fleet Report and data estimated for EWG 20-11 show small discrepancies in values which cannot affect the final results. The significant discrepancies are observed only for two segments DTS VL1824 and PGP VL1012 Mainland Fleet. The MS assessment in the Fleet Report shows the potential over-capitalisation for these segments with CR/BER ratio below 1; in its turn the estimations for EWG 20-11 indicate that segments are profitable with CR/BER ratio 2.1 and 1.2 respectively.

The estimates for the EWG 20-11 do not provide a clear trend. The MS Report show the negative trend for only one small-scale segment DRB VL0010 where the CR/BER ratio is below 1 from 2016 to 2019. It could be explained with the part- time vessels activity in the segment.

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

In the Portuguese annual fleet report the RoFTA-values have been provided for the reference years 2015-2019. The RoFTA ratio was estimated for 38 segments subdivided into the mainland fleet, the Azores and the Madeiran fleets.

There were 53 segments estimated for the EWG 20-11 (15 segments more than in the MS Fleet Report). A comparison between indicator values in MS Fleet Report and data estimated for EWG 20-11 show small discrepancies in values which cannot affect the final results. The significant discrepancies are observed only for one segment DTS VL1824 Mainland Fleet. The MS assessment in the Fleet Report shows the potential over-

capitalisation for this segment with RoFTA indicator below 0.01; in its turn the estimations for EWG 20-11 has value for the RoFTA of 27.8 indicating that segment could generate an extraordinary profit in the long-term.

The estimates for the EWG 20-11 do not provide a clear trend. The MS Report show the negative trend for only one small-scale segment DRB VL0010 where the RoFTA is below zero from 2016 to 2019. It could be explained with the part- time vessels activity in the segment.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

In the Portuguese annual fleet report the VUR -values have been provided for the reference years 2015-2019 subdivided into the mainland fleet, the Azores and the Madeiran fleets. The VUR ratio was estimated for 34 segments. The VUR assumption was based on max-days-observed.

There were 53 segments estimated for the EWG 20-11 (19 segments more than in the MS Fleet Report). The discrepancies are detected for all segments estimated for the EWG 20-11 and MS Fleet Report. The major discrepancies are observed for 10 segments. The reason for the discrepancies is unknown.

The estimates for the EWG 20-11 do not provide a clear trend.

Inactive Fleet Indicator

Inactive vessels have been reported in the Portuguese fleet report.

The numbers presented in the fleet report are similar to those computed by the EWG.

Indicator trends were not provided in the fleet report. No comparison was possible

Assessment of fleet report

The fleet report submitted by Portugal provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments. The fleet report submitted by Portugal is in line with the Commission guidelines COM(2014)545.

The Fleet Report provides information about several management measures carried out by Portugal relating to the establishment of a licensing system. The current Portuguese management system is considered by the MS to be well functioning in order to secure the balance between fishing opportunities and capacity.

Based on the combined analysis of the results of the vessel use, biological sustainability and economic indicators, the MS concludes in the Fleet Report that the Portuguese fleet is in balance with its fishing opportunities in the case of all fleet segments.

The EWG observations are largely in line with the assessment of balance in the Member States' fleet report submitted in 2020.

Measures in action plans

No new or revised action plans were proposed.

3.6.19 Romania (ROU)

Overview of indicator findings

Area 37

There were 9 fleet segments in 2018, of which 6 were active. Of the 6 active segments, landings data were provided for all 6 segments while economic data for aggregated by 4 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 6 fleet segments active in 2017, landings in value have been provided for all 6 fleet segments and SHI indicator values were available for 6.

The 6 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 100.0% of the total value of the landings in 2018 provided by MS, and were as follows:

- 6 fleet segments may be *out of balance* with their fishing opportunities.

Trends were available for the 6 fleet segments:

- All 6 segments displayed an increasing trend.

Stocks at Risk Indicator (SAR)

SAR indicator values were not calculated for any of the segments.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the 6 fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments				6

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/Fmsy is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments			1	5

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

RoI was calculated for 4 segments:

- 3 segments were *in balance* with their fishing opportunities,

- 1 segment was *not sufficiently profitable*.

Trends were calculated for the 4 segments:

- 2 segments displayed an increasing trend,
- 2 segments displayed a decreasing trend.

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

CR/BER was calculated for 4 segments:

- All 4 segments were *in balance* with their fishing opportunities.

Trends were calculated for 4 segments:

- 3 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

VUR was calculated for 4 segments:

- All 4 segments were *out of balance* with their fishing opportunities.

Trends for the 4 segments were as follows:

- 2 segments displayed a decreasing trend,
- 2 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, 3 vessel length segments had inactive vessels (VL0006, VL0612 and VL1218).

The Romanian inactive fleet accounted for 18.6% of the total number of vessels, 4.7% of the total GT and 2.2% of the total kW. At the national level, inactive vessels accounted for less than 20% of the fleet and thus, was *in balance* and displayed decreasing trends in all 3 categories.

The segment with the highest level of inactivity is the VL0612 segment with 14.4% of the number of vessels and 2.7% of the GT.

By vessel length group:

- All segments were *in balance* for all 3 categories. Trends could not be calculated by segment.

Synthesis of indicators and trends

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
MBS	PG	VL0006	ROU MBS PG 0006 NGI*	12																			
MBS	PG	VL0612	ROU MBS PG 0612 NGI*	63																			
MBS	PMP	VL0612	ROU MBS PG 0612 NGI*	38																			
MBS	PMP	VL1218	ROU MBS PMP1218 NGI*	18																			
MBS	PMP	VL1824	ROU MBS PMP1218 NGI*	1																			
MBS	PMP	VL2440	ROU MBS PMP2440 NGI*	4																			
MBS	INACTIVE	VL0006	ROU MBS INA0006 NGI	6																			
MBS	INACTIVE	VL0612	ROU MBS INA0612 NGI	24																			
MBS	INACTIVE	VL1218	ROU MBS INA1218 NGI	1																			
ROU Total				167																			

Based on economic indicator values for 2018 and trends over 2013-2018 and according to criteria in the Commission guidelines, the majority of fleet segments appear to be in balance with fishing opportunities. The exception is the PMP 2440 NGI segment for which all values indicate a decreasing trend. ROFTA also suggest a decreasing trend in PG 0006 and PG 0612.

Based on technical and biological indicator values for 2018 and trends over 2013-2018, all segments appear to be out of balance with fishing opportunities. In particular, the SHI values for 6 segments in 2018 all indicate an imbalance and at the same time, the trends indicate a worsening situation (increasing trend in SHI).

The above observations are not in line with the assessment of balance in the Member States' fleet report submitted in 2020 which concluded that based on the SHI, only one fleet segment is out of balance and the trend in the SHI for that segment shows an improving situation.

Comparison of indicator values

A comparison Indicator values_computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

In the MS annual fleet report just one segment appears as imbalance (PG 6-12m). In the framework of EWG 20-11, all active segments (six) appear as imbalance. The reasons for the differences in status are unknown.

Stocks at Risk Indicator (SAR)

SAR indicator values were not calculated for any of the segments because Romanian catches are below 10% of stocks at risk.

Indicator trends were not provided in the fleet report. No comparison was possible.

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

The comparison between CR/BER reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed minor discrepancies for all values. These discrepancies do not affect to the result for the balance or imbalance of the fleet segments.

EWG 20-11 does not report the data of two segments because this information was not provided by MS under DCF.

Indicator trends were not provided in the fleet report. No comparison was possible.

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

The comparison between ROI reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed discrepancies for just one segment. This discrepancy does not affect to the result for the balance or imbalance of the fleet segment.

EWG 20-11 does not report the data of two segments because this information was not provided by MS under DCF.

Indicator trends were not provided in the fleet report. No comparison was possible.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

Minor discrepancies have been observed in the calculation of VUR between the MS annual fleet report and the ones estimated in the framework of the EWG 20-11. These small discrepancies do not affect to the result for the balance or imbalance of the fleet segments.

In the MS annual fleet report the VUR Indicator was calculated as the ratio between days at sea and maximum days at sea for each length group and gear type. A table reporting the current effort, and the maximum observed days at sea per fleet segment was included in Annex 3 of the MS annual fleet report.

Indicator trends were not provided in the fleet report. No comparison was possible.

Overall observations on indicators and trends. Addressing Task 4a.

According to the information provided in the Romanian Fleet Report just two fleet segments are out of balance and 4 fleet segments are in balance.

According to economic indicators, CR/BER and ROI match between MS Fleet Report and EWG 20-11, so 4 fleet segments appear to be in balance with their fishing opportunities, indicating that the segment is profitable. However, for the other 2 segments data is not provided in the framework of EWG 20-11.

For technical indicator, the results match too. This indicator is estimated based on the ratio between fish days and maximum days-at-sea, all segments seem to be out of balance, although this indicator may be not relevant for Romanian fleet because their activity is seasonal.

However, according to the framework 20-11, the biological indicator SHI shows that the 6 segments of the Romanian fleet are out of balance with an increasing trend, against 1 segment that appears in the MS fleet report.

The reason of this difference has not found, so it is difficult to conclude if may be more than 1 segment out of balance and if overall could be more than two segments out of balance. In consequence, it may be necessary to introduce some measures in their Action Plan.

Assessment of fleet report

The fleet report submitted by Romania provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments.

The fleet report submitted by Romania is in line with the Commission guidelines COM (2014)545.

Analysis and evaluation of the balance between fishing capacity and fishing opportunities are provided in the Romania Report for six consecutive years in order to evaluate the trend.

According to the assessment made by Romania, one segment is imbalance for biological indicator (PG 6-12), and two fleet segments are imbalance (PMP 24-40 and PG 6-12) for economic indicators. In overall, the MS annual report conclude that two segments are imbalance but they are not specified.

Measures in action plans

The action plan submitted by Romania proposes economic and technical measures for four fleet segments: PG 00-06; PG 6-12; PMP 6-12 and PMP 12-18. Values for the SHI have not been used by the Member State to determine which segments require an action plan.

The proposed measures seem to be the same as those proposed in 2019. The measures are broad- ranging, their objectives and targets are unclear and are specified to end in 2020.

The lack or relevant information prevents any assessment of the likely effects of the proposed measures.

3.6.20 Slovenia (SVN)

Overview of indicator findings

Area 37

There were 14 fleet segments in 2018, of which 10 were active. Of the 10 active segments, landings and economic data were provided aggregated by 3 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 3 aggregated segments in 2018, SHI indicator values were available for 3.

According to the criteria in the 2014 Commission 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.

Stocks at Risk Indicator (SAR)

SAR indicator values were not calculated for any of the segments.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the 4 fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments				3

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	2	1		

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

RoI was not calculated.

RoFTA was calculated for 3 segments:

- 2 segments were *in balance* with their fishing opportunities,
- 1 segment was *out of balance* with their fishing opportunities.

Trends were calculated for 3 segments:

- 2 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend.

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

CR/BER was calculated for 3 segments:

- 2 segments were *in balance* with their fishing opportunities,
- 1 segment was *out of balance* with its fishing opportunities.

Trends were calculated for 3 segments:

- 2 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

VUR was calculated for 3 segments:

- All 3 segments were *out of balance* with their fishing opportunities.

Trends were calculated for 3 segments:

- All 3 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, 4 vessel length segments had inactive vessels (VL0006, VL0612, VL1218 and VL1824).

The Slovenian inactive fleet accounted for 43.3% of the total number of vessels, 45.1% of the total GT and 42.0% of the total kW. At the national level, inactive vessels accounted for more than 20% of the fleet in all 3 categories (#, GT and kW) and thus, was *out of balance* and displayed an increasing trend for GT and kW but a decreasing trend for number of vessels.

The segments with the highest level of inactivity were the VL0006 segment with 20.2% of the number of vessels, VL0612 segment with 25.1% of the kW and VL1824 segment with 17.0% of the GT.

By vessel length group:

- 1 segment was *out of balance* in terms of vessel number but displayed a decreasing trend,
- 3 segments were *in balance* in terms of number of vessels,
- All segments were *in balance* in terms of GT,
- 1 segment was *out of balance* in terms of kW and displayed an increasing trend.

Synthesis of indicators and trends

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
MBS	DFN	VL0006	SVN MBS DFN0006 NGI*	24																			
MBS	FPO	VL0006	SVN MBS DFN0006 NGI*	1																			
MBS	PGP	VL0006	SVN MBS DFN0006 NGI*	3																			
MBS	PMP	VL0006	SVN MBS DFN0006 NGI*	1																			
MBS	DFN	VL0612	SVN MBS DFN0612 NGI*	31																			
MBS	DFN	VL1218	SVN MBS DFN0612 NGI*	1																			
MBS	HOK	VL0612	SVN MBS DFN0612 NGI*	3																			
MBS	HOK	VL1218	SVN MBS DFN0612 NGI*	1																			
MBS	DTS	VL0612	SVN MBS DTS1218 NGI*	4																			
MBS	DTS	VL1218	SVN MBS DTS1218 NGI*	7																			
MBS	INACTIVE	VL0006	SVN MBS INA0006 NGI	27																			
MBS	INACTIVE	VL0612	SVN MBS INA0612 NGI	24																			
MBS	INACTIVE	VL1218	SVN MBS INA1218 NGI	6																			
MBS	INACTIVE	VL1824	SVN MBS INA1824 NGI	1																			
SVN Total				134																			

Based on indicator values for 2018 and trends over 2013-2018 and according to the criteria in the Commission guidelines, the majority of fleet segments appear to in balance with fishing opportunities when looking at the economic indicators, but not when looking at the technical indicator. The DTS 1218 NGI segment seems out of balance based on all indicators and the situation seems to be worsening (decreasing trend in economic indicators)

Biological indicators were not computed.

The indicator values are largely in line with the assessment of balance in the Member States' fleet report submitted in 2020, but conclusions on the balance of fleet segments differ in some cases. The Member State points out the indicators alone are not suitable for assessing the balance, particularly not for a small-sized fleet such as in Slovenia. Therefore, no action plan was provided.

Comparison of indicator values

A comparison Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

For none of the fleet segments in 2018 there was information on F and Fmsy for more than 60% of the landings. Therefore, the MS did not calculate the SHI, and no comparison can be made.

Stocks at Risk Indicator (SAR)

The EWG 20-11 did not calculate SAR for any of the fleet segments, and therefore no comparison can be made. The MS annual fleet report provided SAR values for five fleet segments, but based on an adjusted formula and other criteria compared to the Commission guidelines COM(2014)545. The MS explained in its report that because most stocks do not have B_{lim} reference points available, they chose as a criterion for a stock to be at risk if the scientific advice was to reduce fishing mortality.

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

For three fleet segments the CR/BER was calculated for by EWG 20-11, only one segment could be compared with the value in the MS fleet report, because the MS used a clustered fleet segmentation for two fleet segments.

A discrepancy was one found in the indicator for the one fleet segment that was compared, but this did not lead to a discrepancy in the balance conclusion for the indicator.

Indicator trends were not provided in the fleet report. No comparison was possible.

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

For three fleet segments the RoFTA was calculated for by EWG 20-11, only one segment could be compared with the value in the MS fleet report, because the MS used a clustered fleet segmentation for two fleet segments.

No discrepancy was found in the indicator for the one fleet segment that was compared.

Indicator trends were not provided in the fleet report. No comparison was possible.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

For three fleet segments the VUR was calculated for by EWG 20-11, only one segment could be compared with the value in the MS fleet report, because the MS used a clustered fleet segmentation for two fleet segments.

No discrepancy in the indicator values was found the one fleet segment for which a comparison could be made.

Indicator trends were not provided in the fleet report. No comparison was possible.

Inactive Fleet Indicator

The comparison between the inactive fleet indicator reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed the same outputs for all values.

Indicator trends were not provided in the fleet report. No comparison was possible.

Assessment of fleet report

The fleet report submitted by Slovenia provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments.

The fleet report submitted by Slovenia is in line with the Commission guidelines COM(2014)545.

The current Slovenian management system is considered by the MS to be functioning in order to secure a balance between fishing opportunities and capacity. The MS provides in its annual report more details on the rationale behind the conclusion that all fleet segments are in balance. However, the MS points out that the Slovenian fleet is very small in size, making the indicators not very suitable to assess the balance of the fleet with its fishing opportunities. Furthermore, the resources that are used for national fisheries administration and data collection are disproportionally high with regards to the small size of the fisheries sector. Additionally, the MS stresses the need for sub-regional collaboration on data collection and sustainable management to ensure balance between fleet capacity and fishing opportunities within the North Adriatic. For these reasons, the MS therefore argues that a sub-regional and multi-national action plan is more appropriate. No action plans are proposed by the MS.

Measures in action plans

No new or revised action plans were proposed.

3.6.21 Spain (ESP)

Overview of indicator findings

There were 106 fleet segments in 2018, of which 87 were active. Of the 87 active segments, landings data were provided for 87 fleet segments and economic data aggregated by 55 fleet segments. Results are presented by main supra-region below.

<u>Area 27</u>

There were 59 fleet segments in 2018, of which 49 were active. Of the 49 active segments, landings data were provided for 49 fleet segments and economic data aggregated by 31 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 49 active fleet segments in 2018, SHI indicator values were available for 45.

According to the criteria in the 2014 Commission guidelines, the SHI indicator values for 34 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 11 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 41.94% of the total value of the landings in 2018 provided by MS, and were as follows:

- 11 fleet segments may be *out of balance* with their fishing opportunities.

Trends were available for the 9 fleet segments:

- 1 fleet segment displayed an increasing trend,
- 6 fleet segments displayed a decreasing trend,
- 2 fleet segments displayed no clear trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 19 fleet segments in 2018. For all 19 fleet segments, one or more stocks-at-risk were detected:

- 1 fleet segment with 6 stocks-at-risk,
- 2 fleet segments with 4 stocks-at-risk,
- 3 fleet segments with 3 stocks-at-risk,
- 4 fleet segments with 2 stocks-at-risk,
- 9 fleet segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	1	6	26	11

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%

N of fleet segments	28	12	3	2

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

RoI was calculated for 7 segments:

- All 7 segments were *in balance* with their fishing opportunities.

Trends could be calculated for 4 segments:

- 2 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend,
- 1 segment displayed no clear trend.

RoFTA was calculated for 31 segments:

- 26 segments were *in balance* with their fishing opportunities,
- 5 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 19 segments:

- 14 segments displayed an increasing trend,
- 5 segments displayed a decreasing trend.

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

CR/BER was calculated for 31 segments:

- 26 segments were *in balance* with their fishing opportunities,
- 5 segments were *out of balance* with their fishing opportunities,

Trends could be calculated for 19 segments:

- 12 segments displayed an increasing trend,
- 4 segments displayed a decreasing trend,
- 3 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

VUR was calculated for 33 segments:

- 11 segments were *in balance* with their fishing opportunities,
- 22 segments were *out of balance* with their fishing opportunities,

Trends could be calculated for 24 segments:

- 1 segment displayed an increasing trend,
- 23 segments displayed no clear trend.

Synthesis of indicators and trends (Area 27 NAO)

The status of fleet segments and trends for the Spanish fleet in Area 27 is shown below.

An overview of status and trends for the Spanish fleet in all regions is given below in the subsection headed "Status and trends for the Spanish fleet in all regions".

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
NAO	DFN	VL0010	ESP NAO DFN1012 NGI*	1																			
NAO	DFN	VL1012	ESP NAO DFN1012 NGI*	118																			
NAO	DFN	VL1218	ESP NAO DFN1218 NGI	153																			
NAO	DFN	VL1824	ESP NAO DFN1824 NGI*	27																			
NAO	DFN	VL2440	ESP NAO DFN1824 NGI*	4																			
NAO	DRB	VL0010	ESP NAO DRB0010 NGI	1,611																			
NAO	DRB	VL1012	ESP NAO DRB1012 NGI	16																			
NAO	DRB	VL1218	ESP NAO DRB1218 NGI	83																			
NAO	DTS	VL1012	ESP NAO DTS1218 NGI*	6																			
NAO	DTS	VL1218	ESP NAO DTS1218 NGI*	57																			
NAO	DTS	VL1824	ESP NAO DTS1824 NGI	75																			
NAO	DTS	VL2440	ESP NAO DTS2440 NGI	102																			
NAO	DTS	VL40XX	ESP NAO DTS40XX NGI	15																			
NAO	FPO	VL1012	ESP NAO FPO1012 IC *	9																			
NAO	FPO	VL1218	ESP NAO FPO1012 IC *	7																			
NAO	FPO	VL1012	ESP NAO FPO1012 NGI	77																			
NAO	FPO	VL1218	ESP NAO FPO1218 NGI	52																			
NAO	HOK	VL0010	ESP NAO HOK1012 IC *	8																			
NAO	HOK	VL1012	ESP NAO HOK1012 IC *	36																			
NAO	HOK	VL0010	ESP NAO HOK1012 NGI*	2																			
NAO	HOK	VL1012	ESP NAO HOK1012 NGI*	67																			
NAO	HOK	VL1218	ESP NAO HOK1218 IC	30																			
NAO	HOK	VL1012	ESP NAO HOK1218 MA *	3																			
NAO	HOK	VL1218	ESP NAO HOK1218 MA *	4																			
NAO	HOK	VL1824	ESP NAO HOK1218 MA *	1																			
NAO	HOK	VL1218	ESP NAO HOK1218 NGI	73																			
NAO	HOK	VL1218	ESP NAO HOK1824 LLD*	3																			
NAO	HOK	VL1824	ESP NAO HOK1824 LLD*	6																			
NAO	HOK	VL1824	ESP NAO HOK1824 NGI	26																			
NAO	HOK	VL1824	ESP NAO HOK2440 IC *	9																			
NAO	HOK	VL2440	ESP NAO HOK2440 IC *	16																			
NAO	HOK	VL2440	ESP NAO HOK2440 LLD	32																			
NAO	HOK	VL2440	ESP NAO HOK2440 NGI	16																			
NAO	PGP	VL1824	ESP NAO PGP2440 NGI*	4																			
NAO	PGP	VL2440	ESP NAO PGP2440 NGI*	55																			
NAO	PMP	VL0010	ESP NAO PMP0010 IC *	454																			
NAO	PMP	VL1012	ESP NAO PMP0010 IC *	4																			
NAO	PMP	VL1218	ESP NAO PMP0010 IC *	1																			
NAO	PMP	VL0010	ESP NAO PMP0010 NGI	2,106																			
NAO	PMP	VL1012	ESP NAO PMP1012 NGI	40																			
NAO	PMP	VL1218	ESP NAO PMP1218 NGI*	27																			
NAO	PMP	VL1824	ESP NAO PMP1218 NGI*	1																			
NAO	PS	VL0010	ESP NAO PS 1012 NGI*	2																			
NAO	PS	VL1012	ESP NAO PS 1012 NGI*	17																			
NAO	PS	VL1012	ESP NAO PS 1218 IC *	3																			
NAO	PS	VL1218	ESP NAO PS 1218 IC *	13																			
NAO	PS	VL1218	ESP NAO PS 1218 NGI	108																			
NAO	PS	VL1824	ESP NAO PS 1824 NGI	97																			
NAO	PS	VL2440	ESP NAO PS 2440 NGI	87																			
NAO	INACTIVE	VL0010	ESP NAO INA0010 IC	135																			
NAO	INACTIVE	VL0010	ESP NAO INA0010 NGI	495																			
NAO	INACTIVE	VL1012	ESP NAO INA1012 IC *	11																			
NAO	INACTIVE	VL1218	ESP NAO INA1012 IC *	5																			
NAO	INACTIVE	VL1824	ESP NAO INA1012 IC *	2																			
NAO	INACTIVE	VL1012	ESP NAO INA1012 NGI	24																			
NAO	INACTIVE	VL1218	ESP NAO INA1218 NGI	36																			
NAO	INACTIVE	VL40XX	ESP NAO INA2440 NGI*	2																			
NAO	INACTIVE	VL1824	ESP NAO INA2440 NGI*	6																			
NAO	INACTIVE	VL2440	ESP NAO INA2440 NGI*	15																			

Area 37

There were 34 fleet segments in 2018, of which 29 were active. Of the 29 active segments, landings data were provided for 29 fleet segments and economic data aggregated by 18 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 29 fleet segments active in 2018, SHI indicator values were available for 24.

According to the criteria in the 2014 Commission 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 9 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 73.84% of the total value of the landings in 2018 provided by MS, and were as follows:

- 9 fleet segments may be *out of balance* with their fishing opportunities.

Trends were available for the 9 fleet segments:

- 1 fleet segment displayed an increasing trend,
- 5 fleet segments displayed a decreasing trend,
- 2 fleet segments displayed no clear trend,
- 1 fleet segments displayed a null/flat trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 11 fleet segments in 2018. For all 11 fleet segments, one or more stocks-at-risk were detected:

- 1 fleet segment with 4 stocks-at-risk,
- 2 fleet segments with 3 stocks-at-risk,
- 2 fleet segments with 2 stocks-at-risk,
- 6 fleet segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the 28 fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments			3	21

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	14	3	3	4

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

RoI was calculated for 4 segments:

- 4 segments were *in balance* with their fishing opportunities,

Trends could be calculated for 2 segments:

- 2 segments displayed an increasing trend.

RoFTA was calculated for 18 segments:

- 14 segments were *in balance* with their fishing opportunities,
- 4 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 12 segments:

- 7 segments displayed an increasing trend,
- 5 segments displayed a decreasing trend.

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

CR/BER was calculated for 18 segments:

- 14 segments were *in balance* with their fishing opportunities,
- 4 segments were *out of balance* with their fishing opportunities,

Trends could be calculated for 12 segments:

- 6 segments displayed an increasing trend,
- 4 segments displayed a decreasing trend,
- 2 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

VUR was calculated for 29 segments:

- 10 segments were *in balance* with their fishing opportunities,
- 19 segments were *out of balance* with their fishing opportunities,

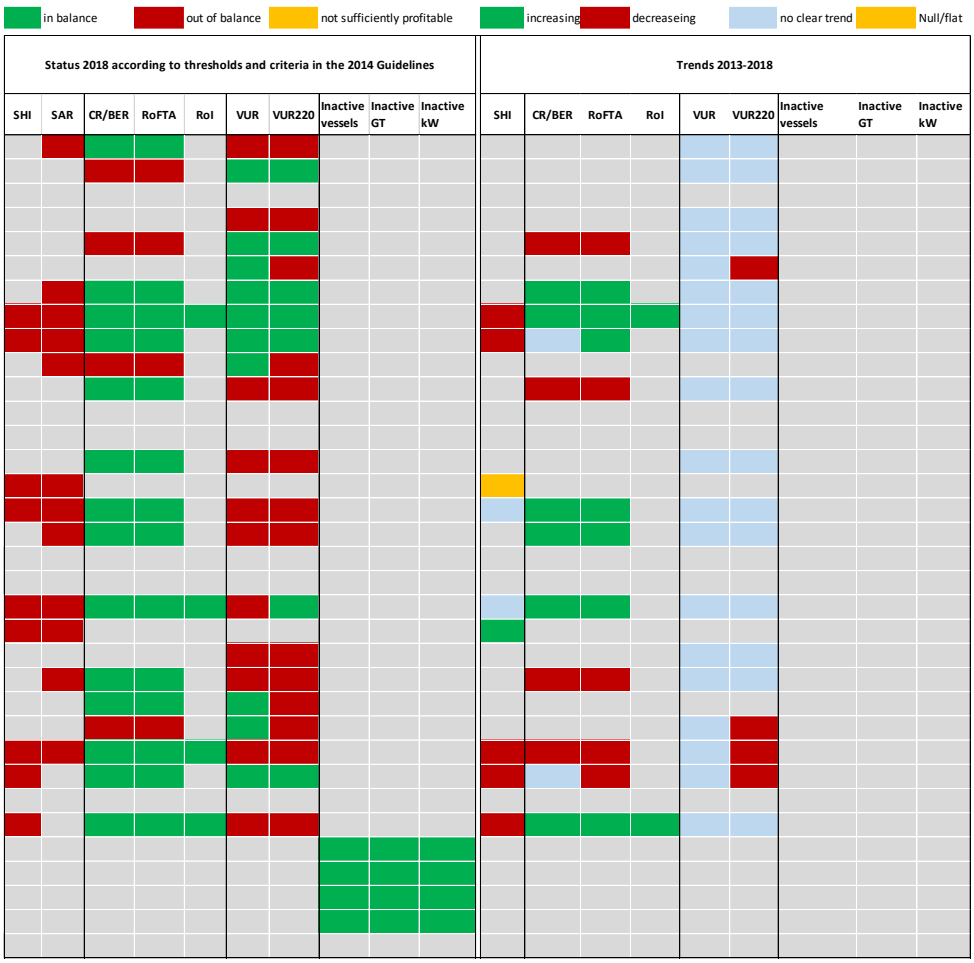
Trends for the 19 segments were as follows:

- All 19 segments displayed no clear trend.

Synthesis of indicators and trends (Area 37, MBS)

The status of fleet segments and trends for the Spanish fleet in Area 37 is shown below.

An overview of status and trends for the Spanish fleet in all regions is given below in the subsection headed "Status and trends for the Spanish fleet in all regions".



SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
MBS	DFN	VL0612	ESP MBS DFN0612 NGI	89																			
MBS	DFN	VL1218	ESP MBS DFN1218 NGI	58																			
MBS	DRB	VL0006	ESP MBS DRB0612 NGI*	6																			
MBS	DRB	VL0612	ESP MBS DRB0612 NGI*	50																			
MBS	DRB	VL1218	ESP MBS DRB1218 NGI	13																			
MBS	DTS	VL0612	ESP MBS DTS0612 NGI	17																			
MBS	DTS	VL1218	ESP MBS DTS1218 NGI	146																			
MBS	DTS	VL1824	ESP MBS DTS1824 NGI	292																			
MBS	DTS	VL2440	ESP MBS DTS2440 NGI	126																			
MBS	FPO	VL0612	ESP MBS FPO0612 NGI	21																			
MBS	FPO	VL1218	ESP MBS FPO1218 NGI*	19																			
MBS	FPO	VL1824	ESP MBS FPO1218 NGI*	1																			
MBS	FPO	VL2440	ESP MBS FPO1218 NGI*	3																			
MBS	HOK	VL0612	ESP MBS HOK0612 NGI	36																			
MBS	HOK	VL0612	ESP MBS HOK1218 LLD*	2																			
MBS	HOK	VL1218	ESP MBS HOK1218 LLD*	29																			
MBS	HOK	VL1218	ESP MBS HOK1218 NGI*	23																			
MBS	HOK	VL1824	ESP MBS HOK1218 NGI*	2																			
MBS	HOK	VL2440	ESP MBS HOK1218 NGI*	1																			
MBS	HOK	VL1824	ESP MBS HOK1824 LLD*	17																			
MBS	HOK	VL2440	ESP MBS HOK1824 LLD*	4																			
MBS	PMP	VL0006	ESP MBS PMP0006 NGI	100																			
MBS	PMP	VL0612	ESP MBS PMP0612 NGI	829																			
MBS	PMP	VL1218	ESP MBS PMP1218 NGI	14																			
MBS	PS	VL0612	ESP MBS PS 0612 NGI	16																			
MBS	PS	VL1218	ESP MBS PS 1218 NGI	73																			
MBS	PS	VL1824	ESP MBS PS 1824 NGI	79																			
MBS	PS	VL40XX	ESP MBS PS 2440 NGI*	2																			
MBS	PS	VL2440	ESP MBS PS 2440 NGI*	24																			
MBS	INACTIVE	VL0006	ESP MBS INA0006 NGI	78																			
MBS	INACTIVE	VL0612	ESP MBS INA0612 NGI	252																			
MBS	INACTIVE	VL1218	ESP MBS INA1218 NGI	54																			
MBS	INACTIVE	VL1824	ESP MBS INA1824 NGI*	16																			
MBS	INACTIVE	VL2440	ESP MBS INA1824 NGI*	6																			

OFR

There were 13 fleet segments in 2018, of which 9 were active. Of the 9 active segments, landings data were provided for 9 fleet segments and economic data aggregated by 6 fleet segments.

Sustainable Harvest Indicator (SHI)

Out of 9 fleet segments active in 2018, SHI indicator values were available for 7.

According to the criteria in the 2014 Commission guidelines, the SHI indicator values for 7 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 2 fleet segments in 2018. For all 2 fleet segments, one or more stocks-at-risk were detected:

- 1 fleet segment with 2 stocks-at-risk,
- 1 fleet segment with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the 7 fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	1	4		2

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	6	1		

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

RoI was calculated for 6 segments:

- 4 segments were *in balance* with their fishing opportunities,
- 2 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 3 segments:

- 1 segment displayed an increasing trend,
- 2 segments displayed a decreasing trend.

RoFTA was calculated for 6 segments:

- 4 segments were *in balance* with their fishing opportunities,
- 2 segments were *out of balance* with their fishing opportunities.

Trends could be calculated for 4 segments:

- 2 segments displayed an increasing trend,
- 2 segments displayed a decreasing trend.

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

CR/BER was calculated for 7 segments:

- 5 segments were *in balance* with their fishing opportunities,
- 2 segments were *out of balance* with their fishing opportunities,

Trends could be calculated for 4segments:

- 2 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend,
- 1 segment displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

VUR was calculated for 6 segments:

- 5 segments were *in balance* with their fishing opportunities,
- 1 segment was *out of balance* with their fishing opportunities,

Trends could be calculated for 4 segments were as follows:

- All 4 segments displayed no clear trend.

The Inactive Fleet Indicators (all regions)

In 2018, 19 segments in the 3 supra-regions had inactive vessels.

The Spanish inactive fleet accounted for 7.9% of the total number of vessels, 1.75% of the GT and 2.6% of the kW. At the national level, inactive vessels accounted for less than 20% of the fleet in vessel number and thus, were *in balance* and displayed a decreasing trend.

By vessel length group:

- All segments were *in balance* for all 3 categories (#, GT and kW).

Synthesis of indicators and trends (Other fishing regions; OFR)

The status of fleet segments and trends for the Spanish fleet in Other Fishing Regions is shown below.

An overview of status and trends for the Spanish fleet in all regions is given below in the subsection headed "Status and trends for the Spanish fleet in all regions".

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
OFR	DTS	VL2440	ESP OFR DTS2440 NGI	40																			
OFR	DTS	VL40XX	ESP OFR DTS40XX NGI	31																			
OFR	HOK	VL1218	ESP OFR HOK2440 NGI*	1																			
OFR	HOK	VL40XX	ESP OFR HOK2440 NGI*	2																			
OFR	HOK	VL1824	ESP OFR HOK2440 NGI*	2																			
OFR	HOK	VL2440	ESP OFR HOK2440 NGI*	9																			
OFR	PS	VL40XX	ESP OFR PS 40XX NGI	26																			
OFR	HOK	VL2440	ESP OFR HOK2440 LLD	58																			
OFR	HOK	VL40XX	ESP OFR HOK40XX LLD	25																			
OFR	INACTIVE	VL1218	ESP OFR INA2440 NGI*	1																			
OFR	INACTIVE	VL40XX	ESP OFR INA2440 NGI*	4																			
OFR	INACTIVE	VL1824	ESP OFR INA2440 NGI*	2																			
OFR	INACTIVE	VL2440	ESP OFR INA2440 NGI*	13																			
ESP Total				9,207																			

Status and trends for the Spanish fleet in ALL REGIONS

Based on indicator values for 2018 and trends over 2014-2018 and according to the criteria in the Commission guidelines, all fleet segments for SAR and SHI appear to be out of balance with fishing opportunities, although the trend in SHI shows an improving situation (decreasing trend in SHI) for 60% of the segments. Of the remaining segments only two, NAO PMP 1218 NGI* and MBS HOK 1824 LLD*, show a deteriorating trend, with the rest showing no clear trend.

The economic data indicate that 80% of fleet segments are in balance with their fishing opportunities, although a number of these are indicating a deteriorating trend.

VUR data indicate that 40% of fleet segments are out of balance with their fishing opportunities. There is no clear trend in the 2013 – 2018 data apart from NAO DFN 1012 NGI* which is showing an improving situation.

The above observations are largely in line with the assessment of balance in the Member States' fleet report submitted in 2020, apart from the biological data. For SHI data there were a number of segments where MS and EWG data were in disagreement. An action plan has been proposed to contribute towards improvements for unbalanced segments.

Comparison of indicator values

A comparison Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

SHI indicator value for 35 fleet segments cannot be used meaningfully to assess 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. Also, for each of these fleet segments the MS fleet report did not provide a value for SHI, not because it has not been calculated but because, the MS says, it is not representative.

Of the remaining 25 segments only 9 segments were comparable. All of these segments were indicated to be out of balance. For 16 segments that were reported by the MS to be either in or out of balance the EWG calculations indicated that these segments comprised less than 40% of the total value of landings.

The MS does not report trends for each indicator so a comparison of trends is not possible. Instead the MS calculates an overall indicator based on various indicators and their relative importance. Subsequently it calculates a weighted indicator for three years, giving greater weight to the results of the most recent year.

Stocks at Risk Indicator (SAR)

In the MS annual fleet report SAR information has not been provided for the reference year 2018.

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

No discrepancies were found between the MS annual fleet report and those estimated in the framework of EWG 20-11. The MS provided data for five fleet segments which were not calculated by the EWG.

Forty-seven fleet segments were in balance while 13 were out of balance.

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

ROI data was not reported.

Once again, no discrepancies were found between the MS annual fleet report and those estimated in the framework of EWG 20-11. The MS again provided data for five fleet segments which were not calculated by the EWG.

The comparison between RoFTA reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs. Forty-seven fleet segments were in balance while 13 were out of balance.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR220)

The MS fleet report didn't provide any data on VUR, instead they reported data for VUR 220. Comparison of the VUR 220 data reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values.

In three fleet segments however the MS report differed from the EWG report as to whether segments were in or out of balance. The MS calculated the MBS FPO1218NGI* and MBS PS1218NGI to be out of balance while the EWG estimated them to be in balance. The MS calculated MBS HOK1824LLD* to be in balance, however the EWG found it to be out of balance.

Inactive Fleet Indicator

Inactive vessels information was not reported in the MS fleet report but was calculated by the EWG.

Assessment of fleet report

The fleet report submitted by Spain provides sound and comprehensive analysis of balance between fleet capacity and fishing opportunity of all fleet segments. The fleet balance was assessed using biological, and technical indicators for 2018: (SHI), (VUR) and (VI).

The fleet report submitted by Spain is in line with the Commission guidelines COM(2014)545.

The MS fleet report stated there were 67 fleet segments in the Spanish fleet in 2018, 22 of which were stated to be out of balance, and 45 segments were in balance. Data however was only presented for 60 fleet segments.

Measures in action plans

The MS has produced an action plan. The Plan proposes a number of measures to contribute towards improvements in the imbalanced fleet segments.

The Action Plan indicates appropriate measures that have been selected for each fleet segment on the basis of the reasons identified as determining factors in its imbalance. The objectives of the plan are established for each fleet.

The time frame for the implementation of this plan will be three years, with progress being reviewed annually. If indicators show the plan is not being effective, measures will be amended and adjusted.

As mentioned above planned measures will be based on the activity of selected fleet segments and will include effort reduction, data collection improvements and measures to improve profitability.

Effort reduction will be achieved through fishing opportunity allocations and the temporary or permanent closure of fishing areas. These measures will be used primarily in NAO and MBS waters, but fishing allocations will also be used in the Canary Islands for some tuna stocks.

The plan provides for an increase in data collection and analysis. Data will be used to develop adaptive management plans for a number of fleet segments.

Measures to improve profitability will be implemented at a regional level and will be funded through the EMFF.

The action plan has a set time frame of three years. The objectives are broad however, and it is not possible to say whether they are likely to be successful within this time frame or not.

3.6.22 Sweden (SWE)

Overview of indicator findings

Area 27

There were 29 fleet segments in 2018, of which 24 were active. Of the 24 active segments, landings data were provided for all 24 segments and economic data for 7 segments.

Sustainable Harvest Indicator (SHI)

Out of 24 fleet segments active in 2018, SHI indicator values were available for 22.

According to the criteria in the 2014 Commission 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 17 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 93.09% of the total value of the landings in 2018 provided by MS, and were as follows:

- 7 fleet segments may be *in balance* with their fishing opportunities;
- 10 fleet segments may be *out of balance* with their fishing opportunities.

Trends could be calculated for 15 fleet segments:

- 6 fleet segments displayed an increasing trend,
- 3 fleet segments displayed a decreasing trend,
- 6 fleet segments displayed no clear trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 12 fleet segments in 2018. For all 12 fleet segments, one or more stocks-at-risk were detected:

- 1 fleet segment with 3 stocks-at-risk,
- 5 fleet segments with 2 stocks-at-risk,
- 6 fleet segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments		1	8	13

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	9	5	2	6

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

RoI was not calculated.

RoFTA was calculated for 7 segments:

- 4 segments were *in balance* with their fishing opportunities,
- 3 segments were *out of balance* with their fishing opportunities,

Trends were calculated for 7 segments:

- 5 segments displayed an increasing trend,
- 2 segments displayed a decreasing trend.

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

CR/BER was calculated for 7 segments:

- 5 segments were *in balance* with their fishing opportunities,
- 2 segments were *out of balance* with their fishing opportunities,

Trends were calculated for 7 segments:

- 3 segments displayed an increasing trend,
- 1 segment displayed a decreasing trend,
- 3 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

VUR was calculated for 7 segments:

- 3 segments were *in balance* with their fishing opportunities,
- 4 segments were *out of balance* with their fishing opportunities,

Trends were calculated for 7 segments:

- 1 segment displayed an increasing trend,
- 6 segments displayed no clear trend.

The Inactive Fleet Indicators

In 2018, 5 vessel length segments had inactive vessels (VL0010, VL1012, VL1218, VL1824 and VL2440).

The Swedish inactive fleet accounted for 24.5% of the total number of vessels, 7.7% of the total GT and 12.5% of the total kW. At the national level, inactive vessels accounted for more than 20% of the fleet in vessel number and thus, was *out of balance* and displayed an increasing trend.

The segment with the highest level of inactivity were the VL0010 segment with 20.7% of the number of vessels and 7.2% of the kW.

By vessel length group:

- 1 segment was *out of balance* in terms of vessel number and displayed an increasing trend,
- 2 segments were *in balance* for all 3 categories (#, GT and kW).

Synthesis of indicators and trends

in balance | out of balance | not sufficiently profitable | increasing | decreaseing | no clear trend | Null/flat

					Status 2018 according to thresholds and criteria in the 2014 Guidelines										Trends 2013-2018								
SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
NAO	DFN	VL0010	SWE NAO DFN0010 NGI*	216																			
NAO	FPO	VL0010	SWE NAO DFN0010 NGI*	290																			
NAO	PGO	VL0010	SWE NAO DFN0010 NGI*	4																			
NAO	PGP	VL0010	SWE NAO DFN0010 NGI*	19																			
NAO	HOK	VL0010	SWE NAO DFN0010 NGI*	26																			
NAO	DFN	VL1012	SWE NAO DFN1012 NGI*	64																			
NAO	FPO	VL1012	SWE NAO DFN1012 NGI*	32																			
NAO	PGP	VL1012	SWE NAO DFN1012 NGI*	1																			
NAO	HOK	VL1012	SWE NAO DFN1012 NGI*	8																			
NAO	DFN	VL1218	SWE NAO DFN1218 NGI*	8																			
NAO	FPO	VL1218	SWE NAO DFN1218 NGI*	1																			
NAO	DTS	VL0010	SWE NAO DTS1012 NGI*	20																			
NAO	DTS	VL1012	SWE NAO DTS1012 NGI*	54																			
NAO	PS	VL1012	SWE NAO DTS1012 NGI*	1																			
NAO	TM	VL1012	SWE NAO DTS1012 NGI*	3																			
NAO	DTS	VL1218	SWE NAO DTS1218 NGI*	67																			
NAO	PS	VL1218	SWE NAO DTS1218 NGI*	1																			
NAO	TM	VL1218	SWE NAO DTS1218 NGI*	1																			
NAO	DTS	VL1824	SWE NAO DTS1824 NGI*	36																			
NAO	TM	VL1824	SWE NAO DTS1824 NGI*	3																			
NAO	DTS	VL2440	SWE NAO DTS2440 NGI*	14																			
NAO	PS	VL40XX	SWE NAO DTS2440 NGI*	1																			
NAO	TM	VL40XX	SWE NAO DTS2440 NGI*	8																			
NAO	TM	VL2440	SWE NAO DTS2440 NGI*	9																			
NAO	INACTIVE	VL0010	SWE NAO INA0010 NGI*	243																			
NAO	INACTIVE	VL1012	SWE NAO INA1012 NGI*	33																			
NAO	INACTIVE	VL1218	SWE NAO INA1824 NGI*	8																			
NAO	INACTIVE	VL1824	SWE NAO INA1824 NGI*	1																			
NAO	INACTIVE	VL2440	SWE NAO INA1824 NGI*	3																			
SWE Total				1,175																			

Based on indicator values for 2018 and trends over the periods 2014 to 2018 inclusive; according to the criteria in the Commission guidelines, the majority of fleet segments appear to be out of balance with fishing opportunities. The exception is the DTS VL 1012 and DTS VL 1218 segments for which all values except VUR indicate in balance. Despite the biological indicators suggesting that the DFN VL1218 and DFN 1012 segments may be out of balance, the trend in SHI shows an improving situation (decreasing trend in SHI).

These observations cannot be properly compared with the assessment of balance in the Member States' fleet report submitted in 2020, due to mismatches in the fleet segments indicated by MS for economic and technical indicators with estimated indicators in the framework of EWG 20-11. A biological SHI indicator in the Swedish Annual fleet report was not provided for the TM VL1218 and PS VL 40XX segments. The Expert group notes that the Member State concluded that fleet segments which use passive gears are imbalanced, but no action plan was proposed for such segments.

Comparison of indicator values

A comparison Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

In the MS annual fleet report, the SHI has been provided for the reference year 2017, therefore EWG 20-11 compared these values with those calculated for 2017.

The comparison between SHI reports in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values with the exception of one discrepancy for SWE NAO DTS1012 NGI* segment. The status in the EWG 20-11 estimation was "out of balance" for which in the MS annual report the indicator was not provided.

The comparison between SHI trends (2012-2017) reported in the MS annual fleet report and those estimated in the framework of EWG 19-13 revealed similar outputs for 9 of 23 trends. In the MS annual report for SWE NAO DTS1824 NGI*, SWE NAO DFN0010 NGI*, SWE NAO DFN1012 NGI*, SWE NAO DTS1012 NGI*, SWE NAO DTS1218 NGI* and SWE NAO DFN1218 NGI* segments were indicated "decreasing" as in the EWG 19-13 estimation were indicated "flat", "increasing" or "no clear trend". In addition, the trends of the fleet SWE NAO DTS2440 NGI*, SWE NAO DFN0010 NGI*, SWE NAO DFN1218 NGI* indicated by MS as "no trend" were in the EWG 19-13 estimation were as "increasing", "decreasing" or no calculation.

Stocks at Risk Indicator (SAR)

In the MS annual fleet report the SAR has been provided for the reference year 2017.

The comparison between SHI reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 revealed similar outputs for most values with the exception of discrepancies for three segments. The status in the EWG 20-11 estimation was "out of balance" for SWE NAO DFN1012 NGI*, SWE NAO DFN1218 NGI*, SWE NAO DTS1218 NGI* where indicator in the MS annual report was missing.

The comparison of SAR trends (2013-2018) which estimated in the framework of EWG 20-11 was impossible due to absent those in the MS annual fleet report.

Inactive Fleet Indicator

The comparisons between IFI reported in the MS annual fleet report and those estimated in the framework of EWG 20-11 was possible only for SWE NAO INA1824 NGI* segment

as for other was not possible due to differences in fleet segmentations provided by MS and used for estimation.

The comparison of IFI trends (2013-2018) which estimated in the framework of EWG 20-11 was impossible due to absent those in the MS annual fleet report.

Assessment of fleet report

The fleet report submitted by Sweden provides a sound and comprehensive analysis of the balance between fleet capacity and fishing opportunities for all fleet segments and is generally in line with the Commission guidelines. However, while the fleet segmentation used for the biological indicators is the same as that used by the EWG, a different segmentation is used for the economic and technical indicators. For the economic and technical indicators, the fleet segments were not identified by specific gears but were designated by active or passive gear groups or further classified by length group.

The current Sweden management system is considered by the MS to be functioning with a balance between fishing opportunities and capacity. Therefore, there are no action plans proposed. However, MS observed the segments with vessels fishing with passive gears are over critical threshold for economical and biological indicator.

Measures in action plans

No new or revised action plans were proposed.

3.6.23 United Kingdom (GBR)

Overview of indicator findings

Area 27

There were 50 fleet segments in 2019 of which 45 were active. Of the 45 active segments, landings data were provided for 45 fleet segments and economic data aggregated by 29 fleet segments.

Sustainable Harvest Indicator (SHI)
Out of 42 fleet segments active in 2019, SHI indicator values were available for 40.

According to the criteria in the 2014 Commission 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 19 fleet segments for which the SHI indicator may be considered meaningful to assess balance or imbalance, accounted for 70% of the total value of the landings in 2019 provided by MS, and were as follows:

- 12 segments may be *in balance* with their fishing opportunities;
- 7 segments may be *out of balance* with their fishing opportunities.

Trends could be calculated for 18 fleet segments:

- 10 segments displayed a decreasing trend,
- 8 segments displayed no clear trend.

Stocks at Risk Indicator (SAR)

SAR indicator was available for 11 fleet segments in 2019. For all 11 fleet segments, one or more stocks-at-risk were detected:

- 2 segments with 5 stocks-at-risk,
- 2 segments with 2 stocks-at-risk,
- 7 segments with 1 stock-at-risk.

Number of Overharvested Stocks (NOS)

The proportional distribution of NOS for the fleet segments for which SHI has been calculated is shown in the table below:

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	3	24	9	2

Economic Dependency Indicator (EDI)

Fleet segments' distribution over EDI classes is shown in the table below. Fleet segments reported are those for which F/F_{msy} is calculated and landings are available.

	0-25%	25-50%	50-75%	75-100%
N of fleet segments	31	3	4	1

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

RoI was calculated for 29 segments:

- 18 segments were *in balance* with their fishing opportunities,
- 5 segments were *out of balance* with their fishing opportunities
- 6 segments were *not sufficiently profitable*.

Trends were calculated for 29 segments:

- 15 segments displayed an increasing trend,
- 14 segments displayed a decreasing trend.

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

CR/BER was calculated for 29 segments:

- 26 segments were *in balance* with their fishing opportunities,
- 3 segments were *out of balance* with their fishing opportunities.

Trends were calculated for 29 segments:

- 12 segments displayed an increasing trend,
- 11 segments displayed a decreasing trend,
- 6 segments displayed no clear trend.

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220})

The data required to calculate VUR (i.e., maximum days-at-sea) were not provided by the MS and thus, VUR220 is analysed here.

VUR_{220} was calculated for 29 segments:

- 11 segments were *in balance* with their fishing opportunities,
- 18 segments were *out of balance* with their fishing opportunities.

Trends were calculated for 29 segments:

- All 29 segments displayed no clear trend.

The Inactive Fleet Indicators

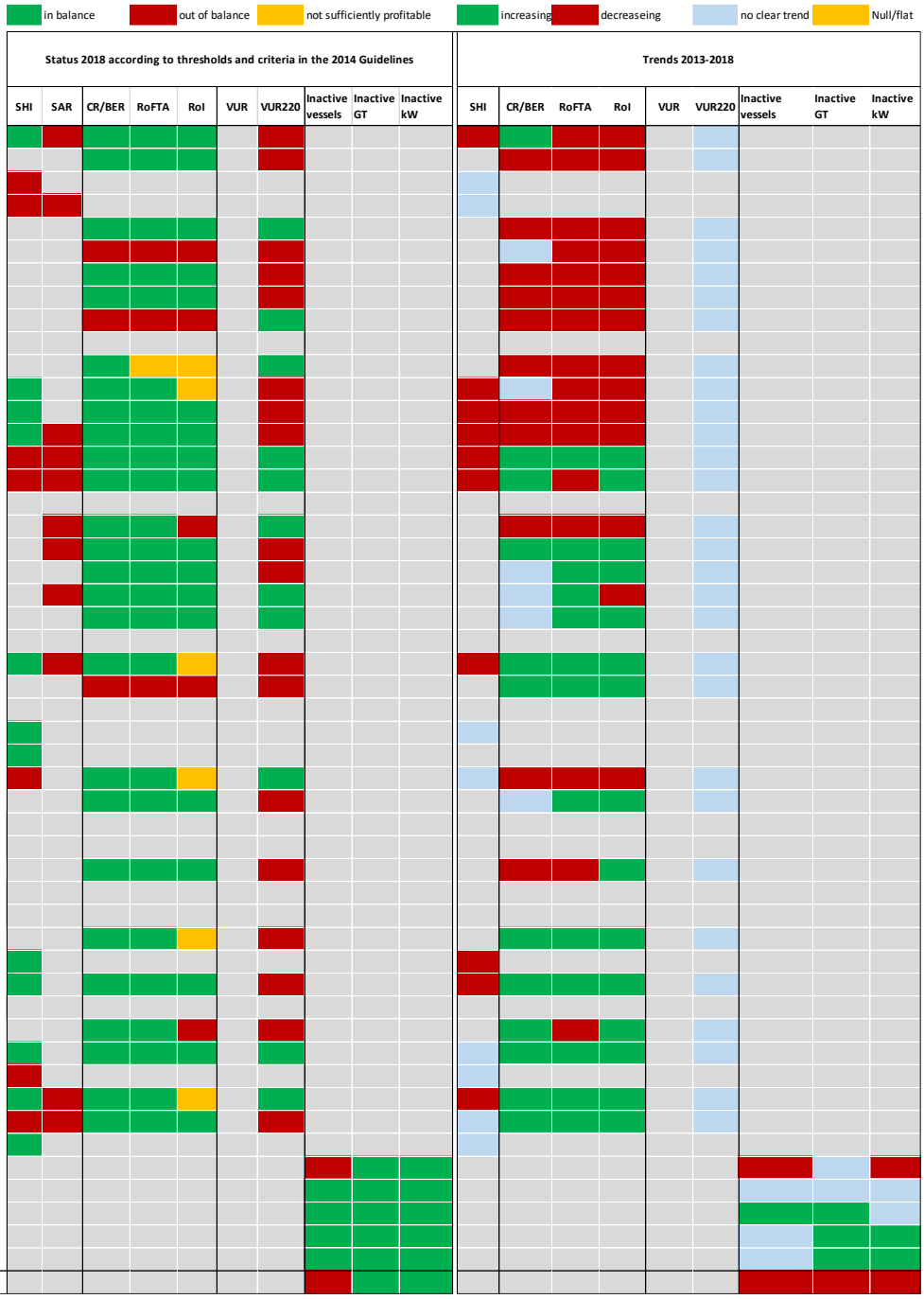
In 2018, 6 vessel length segments had inactive vessels (VL0010, VL1012, VL1218, VL1824, VL2440 and VL40XX). The UK inactive fleet accounted for 24.9% of the total number of vessels, 6.2% of the GT and 11.9% of the kW. At the national level, inactive vessels accounted for more than 20% of the fleet in vessel number and thus, was *out of balance* but displayed a decreasing trend.

The fleet segments with the highest levels of inactivity are the VL0010 group at 22.7% in terms of number of vessels and 7.6% in kW.

By vessel length group:

- 1 segment was *out of balance* in terms of vessel number and displayed a decreasing trend,
- 4 segments were *in balance* for all 3 categories (#, GT and kW) and generally showed an increasing or no clear trend.

Synthesis of indicators and trends



SR	FT	VL	FS name	N vessels 2018	SHI	SAR	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW	SHI	CR/BER	RoFTA	RoI	VUR	VUR220	Inactive vessels	Inactive GT	Inactive kW
NAO	DFN	VL0010	GBR NAO DFN0010 NGI	516																			
NAO	DFN	VL1012	GBR NAO DFN1012 NGI*	7																			
NAO	DFN	VL1218	GBR NAO DFN1012 NGI*	5																			
NAO	DFN	VL1824	GBR NAO DFN2440 NGI*	8																			
NAO	DFN	VL2440	GBR NAO DFN2440 NGI*	5																			
NAO	DRB	VL0010	GBR NAO DRB0010 NGI	101																			
NAO	DRB	VL1012	GBR NAO DRB1012 NGI	32																			
NAO	DRB	VL1218	GBR NAO DRB1218 NGI	113																			
NAO	DRB	VL1824	GBR NAO DRB1824 NGI	26																			
NAO	DRB	VL40XX	GBR NAO DRB2440 NGI*	2																			
NAO	DRB	VL2440	GBR NAO DRB2440 NGI*	19																			
NAO	DTS	VL0010	GBR NAO DTS0010 NGI	198																			
NAO	DTS	VL1012	GBR NAO DTS1012 NGI	72																			
NAO	DTS	VL1218	GBR NAO DTS1218 NGI*	179																			
NAO	DTS	VL1824	GBR NAO DTS1824 NGI	148																			
NAO	DTS	VL2440	GBR NAO DTS2440 NGI	94																			
OFR	DTS	VL40XX	GBR NAO DTS40XX NGI*	1																			
NAO	DTS	VL40XX	GBR NAO DTS40XX NGI*	7																			
NAO	FPO	VL0010	GBR NAO FPO0010 NGI	1,865																			
NAO	FPO	VL1012	GBR NAO FPO1012 NGI	190																			
NAO	FPO	VL1218	GBR NAO FPO1218 NGI	83																			
NAO	FPO	VL1824	GBR NAO FPO1824 NGI*	12																			
NAO	FPO	VL2440	GBR NAO FPO1824 NGI*	3																			
NAO	HOK	VL0010	GBR NAO HOK0010 NGI	622																			
NAO	HOK	VL1012	GBR NAO HOK1012 NGI*	17																			
NAO	HOK	VL1218	GBR NAO HOK1012 NGI*	2																			
OFR	HOK	VL40XX	GBR NAO HOK2440 NGI*	1																			
OFR	HOK	VL2440	GBR NAO HOK2440 NGI*	1																			
NAO	HOK	VL2440	GBR NAO HOK2440 NGI*	14																			
NAO	MGP	VL0010	GBR NAO MGP0010 NGI*	35																			
NAO	TM	VL0010	GBR NAO MGP0010 NGI*	5																			
NAO	MGP	VL1012	GBR NAO MGP1218 NGI*	3																			
NAO	MGP	VL1218	GBR NAO MGP1218 NGI*	4																			
NAO	PS	VL1218	GBR NAO MGP1218 NGI*	6																			
NAO	TM	VL1218	GBR NAO MGP1218 NGI*	7																			
NAO	PGP	VL0010	GBR NAO PGP0010 NGI*	68																			
NAO	PMP	VL0010	GBR NAO PGP0010 NGI*	4																			
NAO	TBB	VL0010	GBR NAO TBB0010 NGI*	7																			
NAO	TBB	VL1012	GBR NAO TBB0010 NGI*	9																			
NAO	TBB	VL1218	GBR NAO TBB1218 NGI	24																			
NAO	TBB	VL1824	GBR NAO TBB1824 NGI	17																			
NAO	TBB	VL40XX	GBR NAO TBB2440 NGI*	7																			
NAO	TBB	VL2440	GBR NAO TBB2440 NGI*	27																			
NAO	TM	VL40XX	GBR NAO TM 40XX NGI*	26																			
NAO	TM	VL2440	GBR NAO TM 40XX NGI*	1																			
NAO	INACTIVE	VL0010	GBR NAO INA0010 NGI	1,387																			
NAO	INACTIVE	VL1012	GBR NAO INA1012 NGI	60																			
NAO	INACTIVE	VL1218	GBR NAO INA1218 NGI	37																			
NAO	INACTIVE	VL1824	GBR NAO INA1824 NGI	15																			
NAO	INACTIVE	VL2440	GBR NAO INA2440 NGI	26																			
GBR Total				6,118																			

Based on indicator values for 2018 and trends over 2014-2018, for those fleet segments for which a meaningful SHI could be computed (19 segments), seven segments are indicated to be out of balance and for all segments the situation seems to be worsening (increasing trend in SHI value) or there is no clear trend. In general, the economic indicators suggest that the vast majority of fleet segments were in balance in 2018 although the trends in economic indicators vary between segments.

The above observations are largely in line with the assessment of balance in the Member States' fleet report submitted in 2020 where the MS proposes an action plan for many fleet segments including clear targets, tools and time frame in an attempt to address the potential imbalance of these fleet segments.

The Expert group is unable to judge the extent to which the proposed measures are likely to achieve the objectives and targets of the action plan.

Comparison of indicator values

A comparison Indicator values computed by the EWG 20-11 and those in the fleet report submitted by 31 May 2020 are given in Annex II. Points of note for each indicator are listed below.

Sustainable Harvest Indicator (SHI)

In the MS annual fleet report the SHI estimations are those produced by JRC (EWG 19-13) for the reference year 2017. Therefore, no comparisons were made.

Stocks at Risk Indicator (SAR)

In the MS annual fleet report the SHI estimations are the ones produced by JRC (EWG 19-13) for the reference year 2017. Therefore, no comparison was made.

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

In the MS annual fleet report the CR/BER ratio has been provided for the reference years 2016-2018.

A comparison between the MS' Fleet reports for 2019 and equivalent fleet segments as estimated by EWG 20-11 for the year 2018 show similar values for CR/BER and the same status for all the fleet segments.

CR/BER was calculated for 29 segments:

- 26 segments were *in balance* with their fishing opportunities,
- 3 segments were *out of balance* with their fishing opportunities,

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

In the MS annual fleet report the ROI indicator is provided for the reference years 2016-2018. The RoFTA indicator is not provided.

A comparison between indicator values in the MS' Fleet reports for 2019 and the values for equivalent fleet segments as estimated by EWG 20-11 for the year 2018 reveals different estimates for many segments. Also, for nine fleet segments the status according to the Expert group estimates differs from that given in the fleet report.

ROI was calculated for 29 segments:

- 22 segments were *in balance* with their fishing opportunities,
- 7 segments were *out of balance* with their fishing opportunities,

The Vessel Use Indicator (VUR) and/or Vessel Use Indicator 220 (VUR_{220}**)**

In the MS annual fleet report the VUR_{220} Indicator was calculated as the ratio between days at sea and theoretical maximum days at sea (220 days) for each fleet segment.

A comparison between indicator values in the MS' Fleet reports for 2019 and the values for equivalent fleet segments as estimated by EWG 20-11 for the year 2018 reveals the same output for all the values and the same status for all the fleet segments.

VUR_{220} was calculated for 29 segments:

- 11 segments were *in balance* with their fishing opportunities,
- 18 segments were *out of balance* with their fishing opportunities,

Eight of the segments that are out of balance belong to the small-scale fleet under 10m and the MS explains that the small-scale segments are engaged in seasonal patterns of fishing activity and they may actively fish only during limited periods. Therefore, MS suggests that the theoretical maximum of 220 is not suitable for them. The same stands for the fleet segment TM VL40XX where similar factors of seasinality in regards to activity apply.

Inactive Fleet Indicator

Inactive vessels have been reported as number, GT and kW in the MS annual fleet report. The inactive fleet indicator is estimated by MS for the period 2017-2018 for the following vessel – length category segments:

- VL0010
- VL1012
- VL1218
- VL1824
- VL2440
- VL40XX

The inactive fleet indicator for the segment with vessel length class VL0010 is more than 20% the last 3 years (2017-2019) indicating technical inefficiency. For the rest of the segments the indicator is below 20%.

4 TASK 5 - FLEET SEGMENTS IN THE OUTERMOST REGIONS

4.1 Introduction

This section is provided in response to Task 5 of the Terms of Reference. The Expert group was requested to undertake the following:

"For the Outermost Regions of France (Réunion, French Guiana, Martinique, Guadeloupe, Saint-Martin and Mayotte), Portugal (Madeira and Azores) and Spain (Canary Islands), list those fleet segments that according to the most updated set of data (2018 or later if available) for either the biological, economic or technical indicators in the Commission Guidelines, 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. 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 at least 75% of the total value of the landings by that fleet segment. List the fleet segments for which information available does not allow to calculate the above indicators and conclude on balance."

Since 2019 (STECF 19-13) Member States' fleets operating in all OMRs have been identifiable in the DCF data calls by a geo-indicator code. Nevertheless, for Spain and France the historical time-series for their OMRs extend back to 2017 only, whereas that for Portugal extends back to 2008. Hence, at present, historical trends in data cannot be computed because the time series is only available for 2 consecutive years.

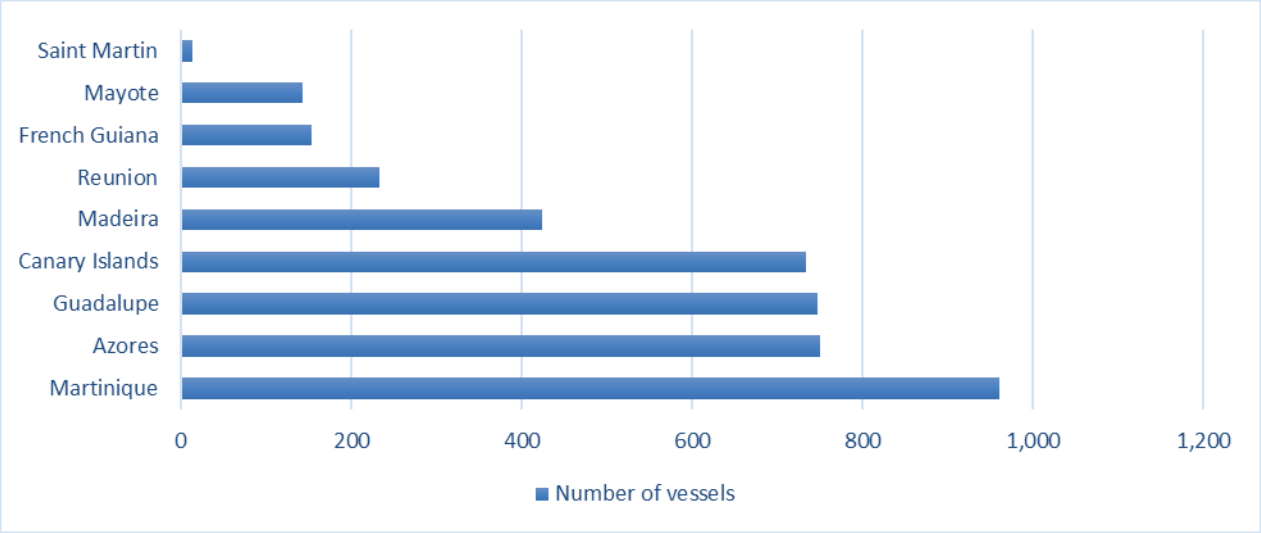
Furthermore, despite recent improvements in collection and submission of data under the 2020 fleet economic data call, there remains a serious shortfall in fishery-dependent data (biological and economic) for the fleets operating in the OMRs and a paucity of stock assessments. To improve knowledge of the fisheries and comprehensively assess their status with respect to the balance indicators, such shortfalls in data collection and provision need to be improved.

In responding to this request the Expert group has interpreted the request explicitly in that separate lists of fleet segments are provided wherever in accordance with the criteria in the Commission guidelines, the values for the biological, economic or technical indicators imply that the segment is out of balance. However, to produce such lists in such a way is actually not strictly in line with Commission guidelines which recommend that to determine imbalance in a fleet segment the indicators should be considered in combination and over time.

The Expert group further notes that the Vessel utilization ratio VUR 220 is not an informative or useful indicator of the balance between capacity and fishing opportunities especially for small scale fleet segments (part-time jobs and weather constrains) and for fleet segments catching large pelagic species (seasonality - migration).

4.2 OMR fleets at a glance

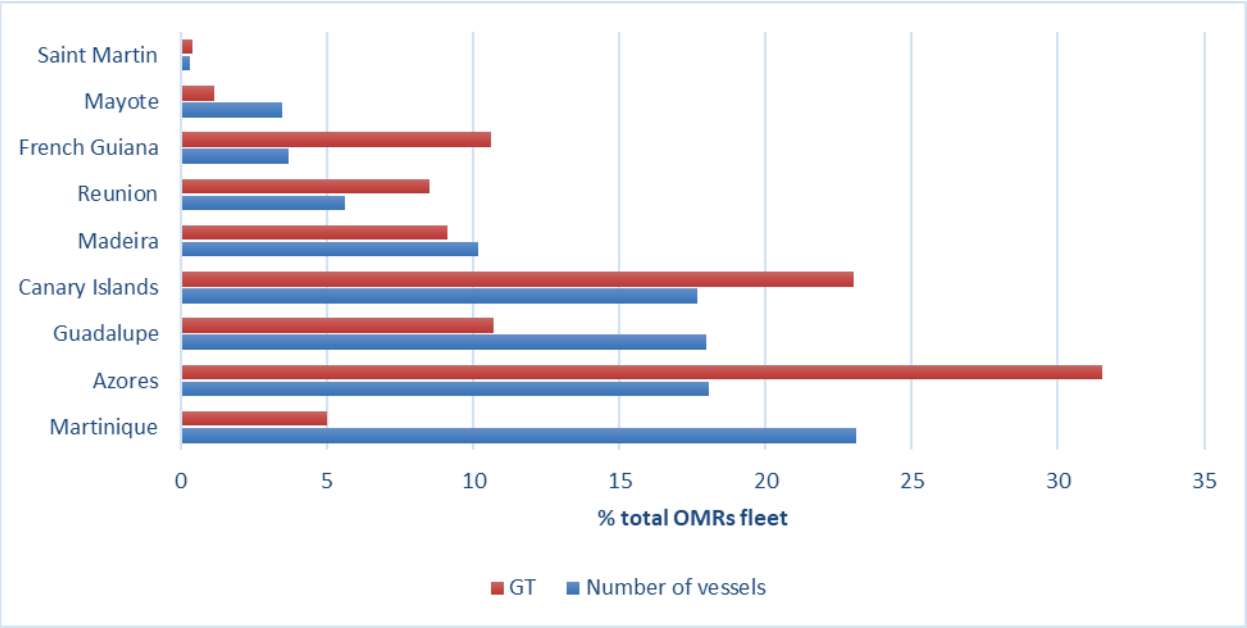
The EU OMR fleet totalled 3 751 vessels in 2018. The French OMR fleet was the most numerous, accounting for 54% in number of all reported vessels. The Portuguese and Spanish fleets represented 28% and 18% respectively of the total EU OMR vessels in number.



Number of vessels for the OMR

Martinique, with 960 vessels, was the largest OMR fleet (by number), followed by Azores (750), Canary Islands (749), Guadeloupe (747), Madeira (423), Reunion (233), French Guiana (153) and, Mayotte (143).

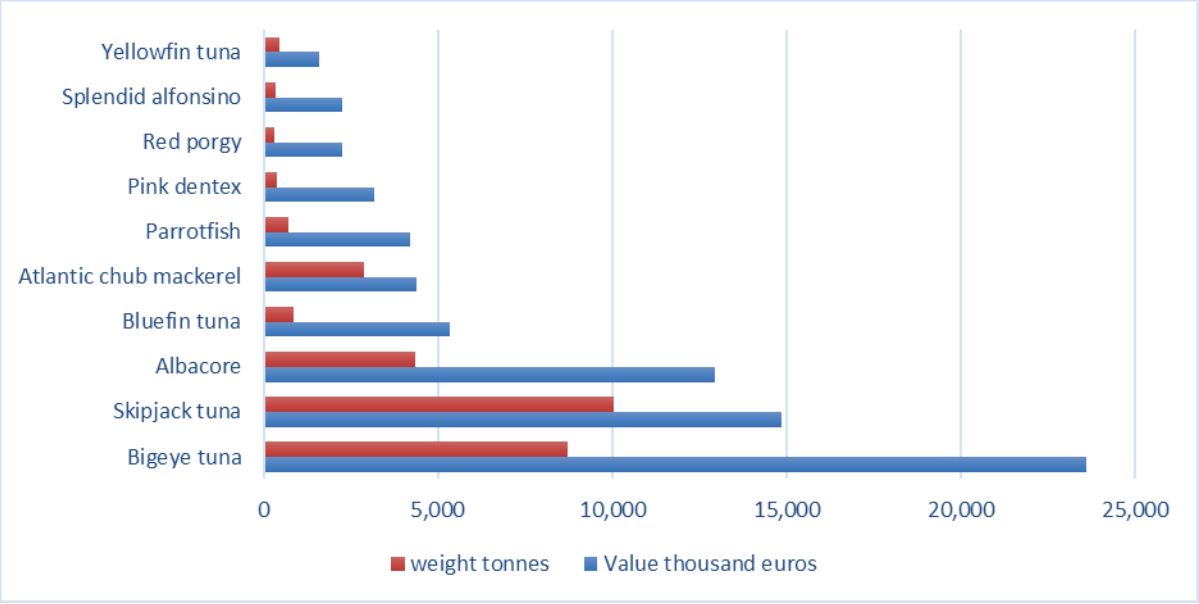
About 93% of the vessels in OMR belong to the small-scale coastal fleet (SSCF).



Number of vessel vs GT of the OMRs

A comparison between the number of vessels and their total GT reveals that Martinique is mainly composed by small scale fleet (23% in number of vessels and 5% in GT). Conversely, the fleets in the Azores, Canary Islands and French Guiana comprise larger vessels.

The OMR fleet spent 176000 days at sea in 2018, to land approximately 36000 tonnes of seafood valued in EUR 97 million.



Most representative species in value of landings

Tuna and other large pelagic species represent a significant proportion of the landings with bigeye, skipjack, albacore and bluefin tuna comprising the largest components in both weight and value.

The Guadeloupe, Azores and Canary Islands fleets were the most important in terms of landing weight and value (with landed value of 23.5%, 22.9% and 15.5% respectively), followed by Reunion (12.7%), Martinique (11.2%) and Mayotte (5.8%)

The 2020 Annual Economic Report (STECF 20-06) will provide more details on the OMR fleets and their economic performance. However, the lack of species-specific data on catches and landings and results from stock assessments means that information to compute balance indicator values at the fleet level is severely compromised.

4.3 French Outermost Regions

The data provided for the six French OMRs, uses the geographical indicator to distinguish the OMR fleets and the balance indicators associated with those fleets (Table 7.3.1).

The SAR indicator was not available mainly due to an absence of relevant Stock Assessment results.

Table 7.3.1 - List of Fleet Segments in French Outermost Regions and status with respect to available balance indicators in 2018.

Overseas Territory	Cluster	SAR	SHI	RoFTA	CR/BER	VUR	VUR_{220}
French Guiana	FRA OFR DFN0010 GF						
	FRA OFR DTS1824 GF						
	FRA OFR DFN1012 GF *						
Guadeloupe	FRA OFR DFN0010 GP		<40%				
	FRA OFR FPO0010 GP		<40%				
	FRA OFR HOK0010 GP		<40%				
	FRA OFR PS 0010 GP						
	FRA OFR PGP0010 GP *		<40%				
	FRA OFR PGP1012 GP *		<40%				
Saint-Martin	FRA OFR PGP0010 MF *						
Martinique	FRA OFR DFN0010 MQ		<40%				
	FRA OFR FPO0010 MQ		<40%				
	FRA OFR HOK0010 MQ						
	FRA OFR HOK1012 MQ *						
	FRA OFR PGO0010 MQ						
	FRA OFR PGP0010 MQ *		<40%				
Réunion	FRA OFR HOK1218 RE						
	FRA OFR HOK1824 RE *						
	FRA OFR HOK0010 RE *						
	FRA OFR PGP0010 RE *		<40%				
Mayotte	FRA OFR HOK0010 YT		<40%				
	FRA OFR DFN0010 YT *		<40%				

For each OMR and for those segments that are indicated to be out of balance, a list of the fish stocks on which segments rely are described in the following sub-sections.

GUADELOUPE

Segment - FRA OFR FPO0010 GP

Imbalance indicators – Rofta, CR/BER

Species/area	31	%
Snappers nei	612 539	10.8
Caribbean spiny lobster	584 409	10.3
Filefishes	564 302	9.9
Common dolphinfish	506 408	8.9
Spiny lobsters nei	471 403	8.3
Groupers nei	388 837	6.8
Stromboid conchs nei	377 033	6.6
Parrotfishes, nei	257 866	4.5
Surmullets	251 030	4.4
Red lionfish	233 854	4.1
Squirrelfishes	190 753	3.4

Most representative species in value of landings (€)

	2017	2018
Rofta (%)	-16.9	-9.2
CR/BER	0.66	0.85

Economic Indicators for the last two years

Despite the indication of imbalance according to the economic indicators for this fleet segment, some improvement was observed between 2017 and 2018.

For biological indicators, the serious absence of catch and landings data for the most important species in the catches of the segment prevents any computation and assessment of the balance indicators.

Segment - FRA OFR PGP1012 GP

Imbalance indicators – Rofta, CR/BER

Species/area	31	%
Common dolphinfish	6 919 577	30.7
Stromboid conchs nei	1 713 384	7.6
Caribbean spiny lobster	1 571 322	7.0
Yellowfin tuna	1 445 514	6.4
Parrotfishes, nei	1 297 251	5.8
Spiny lobsters nei	1 285 420	5.7

Filefishes	1 254 714	5.6
Snappers nei	1 199 188	5.3
Groupers nei	777 843	3.4

Most representative species in value of landings (€)

	2017	2018
Rofta (%)	-7.8	-5.8
CR/BER	0.62	0.70

Economic Indicators for the last two years

Despite the indication of imbalance according to the economic indicators for this fleet segment, some improvement was observed between 2017 and 2018.

For biological indicators, the serious absence of catch and landings data for the most important species in the catches of the segment prevents any computation and assessment of the balance indicators.

REUNION

Segment - FRA OFR HOK1218 RE

Imbalance indicators – Rofta, CR/BER

Species/area	51.6	51.7	Total	%
Swordfish	6 161 958	1 814 026	7 975 984	36.0
Yellowfin tuna	2 707 805	563 374	3 271 178	51.8
Bigeye tuna	2 183 033	267 155	2 450 188	64.6
Albacore	1 390 363	504 243	1 894 607	72.7
Blue marlin	509 365	183 087	692 452	75.7

Most representative species in value of landings (€)

	2017	2018
Rofta (%)	-104.5	-47.3
CR/BER	-1.05	-0.43

Economic Indicators for the last two years

Despite the indication of imbalance according to the economic indicators for this fleet segment, some improvement was observed between 2017 and 2018.

For biological indicators, the serious absence of catch and landings data for the most important species in the catches of the segment prevents any computation and assessment of the balance indicators.

Segment - FRA OFR HOK1824 RE

Imbalance indicators – Rofta, CR/BER

Species/area	51.6	51.7	51.8	Total	%
Swordfish	1 638 152	172 202	67 801	1 878 155	36.0
Yellowfin tuna	460 862	52 519	11 725	525 106	51.8

Bigeye tuna	429 885	16 538		446 423	64.6
Albacore	167 781	42 365		210 146	75.7

Most representative species in value of landings (€)

	2017	2018
Rofta (%)	-50.7	-23.5
CR/BER	-0.83	-0.27

Economic Indicators for the last two years

Despite the indication of imbalance according to the economic indicators for this fleet segment, some improvement was observed between 2017 and 2018. In the fleet report submitted this year, some improvement in data collection has been reported as a result of an increase in the number of vessels that responded to enquiries.

4.4 Portuguese Outermost Regions

The data provided for the two Portuguese OMRs, Azores and Madeira, uses the geographical indicator to distinguish the OMR fleets and the balance indicators associated with those fleets. (Table 7.4.1)

Table 7.4.1 - List of Fleet Segments in Portuguese Outermost Regions and status with respect to available balance indicators in 2018.

Overseas territory	Cluster	SAR	SHI	RoFTA	CR/BER	VUR	VUR220
Azores	PRT NAO DFN0010 P3		<40%				
	PRT NAO HOK0010 P3		<40%				
	PRT NAO HOK1012 P3		<40%				
	PRT NAO HOK1218 P3		<40%				
	PRT NAO HOK2440 P3 *						
	PRT NAO PGP0010 P3 *		<40%				
	PRT NAO PS 0010 P3		<40%				
	PRT NAO PS 1012 P3 *		<40%				
	PRT NAO PS 1218 P3						
Madeira	PRT NAO HOK0010 P2 *		<40%				
	PRT NAO HOK1218 P2		<40%				
	PRT NAO HOK1824 P2		<40%				
	PRT NAO HOK2440 P2						
	PRT NAO MGP0010 P2						
	PRT NAO MGP1824 P2 *						

For each OMR and for those segments that are indicated to be out of balance, a list of the fish stocks on which segments rely are described in the following sub-sections.

AZORES

Segment - PRT NAO HOK2440 P3 *

Imbalance indicators – SHI, VUR220

Species/area	34.2	27.10.a	27.8.c	27.8.e	27.9.a	27.9.b	34.1.2	Total	%
Bigeye tuna	1 873	46 482 592	193	34	38 923	3 430	13 130 414	59 657 459	45.3
Skipjack tuna		22 952 036					2 146 664	25 098 700	19.1
Albacore		5 124 328					10 414 475	15 538 803	11.8

Most representative species in value of landing (€)

SHI indicates imbalance for this fleet segment due to high dependence on bigeye tuna catches (45.3%) F/F_{msy} = 1.63

MADEIRA

Segment - PRT NAO HOK1824 P2 *

Imbalance indicators – Rofta, CR/BER

Species/area	34.2	27.10.a	Total	%
Black scabbardfish	34 114	7 382 066	7 416 180	57.9
Bigeye tuna	91 877	3 008 469	3 100 346	24.2
Skipjack tuna	106 194	1 181 536	1 287 730	10.0

Most representative species in value of landings (€)

Despite of the negative economic indicators for the fleet segment, historical data are available. According to the 2014 Commission guidelines, it is appropriate to consider several years rather than a single year, so for this particular fleet segment no conclusion can be taken about the balance or imbalance.

	2014	2015	2016	2017	2018
Rofta					
CR/BER					

Economic Indicators for the last five years

Segment - PRT NAO HOK2440 P2

Imbalance indicators – SHI

Species/area	51.6	51.7	51.8	27.10.a	34.1.2	Total	%
Bigeye tuna	3 833	642	96 418	91 994	15 109 895	15 302 782	57.2
Skipjack				591 329	5 426 773	6 018 102	22.5
Albacore					2 706 575	2 706 575	10.1

Most representative species in value of landings (€)

SHI indicates imbalance for this fleet segment due to high dependence on bigeye tuna catches (57.2%) F/F_{msy} = 1.63

4.5 Spanish Outermost Regions

The data provided for the Spanish OMR, Canary Islands, uses the geographical indicator to distinguish the OMR fleets and the balance indicators associated with those fleets. (Table 7.5.1)

Table 7.5.1 - List of Fleet Segments in Spanish Outermost Regions and status with respect to available balance indicators in 2018.

Overseas territory	Cluster	SAR	SHI	RoFTA	CR/BER	VUR	VUR220
Canary Islands	ESP NAO FPO1012 IC *		<40%				
	ESP NAO HOK1012 IC *		<40%				
	ESP NAO HOK1218 IC		<40%				
	ESP NAO HOK2440 IC *						
	ESP NAO PMP0010 IC *		<40%				
	ESP NAO PS 1218 IC *						

Most representative species in value of landings

For those segments that are indicated to be out of balance, a list of the fish stocks on which segments rely are described below:

Segment - ESP NAO FPO1012 IC *

Imbalance indicators – SAR, VUR

Species/area	34.1.2	%	Stock assessement
Bluefin tuna	64 793	10,3	
Parrotfish	58 998	9,4	
Striped soldier shrimp	56 201	8,9	
Narwal shrimp	42 904	6,8	
Common dentex	38 448	6,1	
Pink dentex	37 916	6,0	
Skipjack tuna	30 804	4,9	
Common octopus	27 394	4,3	
Red porgy	26 576	4,2	
Forkbeard	17 163	2,7	
Purple dye murex	14 914	2,4	
White seabream	14 486	2,3	
Bigeye tuna	14 325	2,3	YES
Yellowfin tuna	12 089	1,9	YES
White trevally	11 889	1,9	

Mediterranean moray	11 182	1,8	

Most representative species in value of landings (€)

The selecting stock for SAR was porbeagle due to criteria c (prohibited species list COUNCIL REGULATION (EU) 2020/123, art.16) and criteria d (CITES listing Annex II in 2013) selected by % of landing in regards to total EU landing for the stock. It must be stressed that the imbalanced is related to the fleet segment FPO1218 IC that it was clustered in this fleet segment and the catches for the species are tiny when compared with the total catches of the segment.

Segment - ESP NAO HOK2440 IC *

Imbalance indicators – SHI, Rofta, CR/BER, VUR

Species/area	34.2	34.1.1	34.1.1.1	34.1.1.2	34.1.1.3	34.1.2	34.1.3.1	Total	%
Bigeye tuna	14 905	64 000	4 822	44 921	478 016	11 311 619	141 073	12 059 356	67.1
Albacore	6 583		7 374		5 429	3 545 395		3 564 781	19.8
Skipjack tuna				559	15 837	1 225 929	29 268	1 271 594	7.1

Most representative species in value of landings (€)

SHI indicates unbalance for this fleet segment due to high dependence of caches of Big eye tuna (67.1%) F/F_{msy} = 1.63

Segment - ESP NAO PMP0010 IC *

Imbalance indicators – SAR, Rofta, CR/BER, VUR

Species/area	34.1.2	%	Stock assessement
Skipjack tuna	6 590 165	17,3	
Parrotfish	4 040 542	10,6	
Pink dentex	2 691 873	7,1	
Bigeye tuna	2 157 725	5,7	YES
Albacore	1 987 773	5,2	YES
Red porgy	1 855 641	4,9	
Bluefin tuna	1 458 269	3,8	
White trevally	1 106 918	2,9	
Yellowfin tuna	937 931	2,5	YES
White trevally	924 297	2,4	
Splendid alfonsino	712 215	1,9	
Grey tiggerfish	671 000	1,8	
Narwal shrimp	560 489	1,5	
European hake	546 974	1,4	
European pilchard	528 873	1,4	
Atlantic chub mackerel	461 848	1,2	
Comber	450 201	1,2	
Common octopus	435 687	1,1	

Surmullet	432 586	1,1	

Most representative species in value of landings (€)

The selecting stock for SAR was Madeiran sardinella to criterion b (CECAF advice) for both 10% threshold and Atlantic white marlin under criterion a (ICCAT assessment since 2010).

Segment - ESP NAO PS1218 IC *

Imbalance indicators – SHI, VUR

Specie	34.1.2	%
Atlantic chub mackerel	3 758 869	47.6
Blue jack mackerel	1 017 863	12.9
Jack and horse mackerels nei	869 867	11.0

Most representative species in value of landings (€)

SHI indicates unbalance for this fleet segment due to high dependence of caches of Atlantic chub mackerel (47,6%) F/F_{msy} = 1.1 and horse mackerel (11%) F/F_{msy} = 1.3.

4.6 Data Issues

4.6.1 Biological Data

The ability to calculate and the reliability of the biological indicators for each big area is mainly data dependent:

1- We need to urgently increase our knowledge on stocks and improve stock assessments. In particular, information on fishing mortality and reference points for as many stocks as possible is needed, together with stock assessments that are validated by the RFMOs. Outside Area 27 and 37 with ICES and GFCM, TUNA RFMOs are effective in producing estimates for F and F_{msy} , even if the assessment process, involving many different countries is challenging. Other RFMOs are rather less effective (due to the lack of data or/and of cooperation between the countries to develop a common fisheries policy). For the Canary Islands for example, there are few (or none) formal stock assessments except for some tuna species.

2- We also need catches information at the stock level, that means with good species identification with full reporting at species-specific level and spatial catches with sufficient detailed scale. In Mayotte, as example, the first species caught is "Marine Fishes nei" (cf. Figure 4.6.1). Such species reporting is impossible to specific stocks. An analogous problem arises if the spatial declaration of the catches is too large or not given.

3- In Outermost regions (as for other Long distant RFMO's or Mediterranean case) Blim is not a reference point that is routinely computed during stock assessments. To properly perform SAR calculation, EWG pre meeting also mentioned the need

to agree on a proxy value for B_{lim} when not available. The Expert group suggests that a value equivalent to 50% x B_{MSY} could be a good candidate as a proxy for B_{lim}.

4- A large number of harvested stocks in Outermost region are not assessed. This point was raised by STECF EWG 19-19 dedicated to Outermost regions e.g. for Martinique, Mayotte and Gadeloupe, 90% of the species landed are not subject to a stock assessment. To improve the knowledge base of fishery-dependent and independent data, an increase in sampling coverage and intensity is required. DG MARE should take steps to ensure that an appropriate level of sampling in the OMRs is contained in the National Work plans for the Member States concerned before such plans are approved.

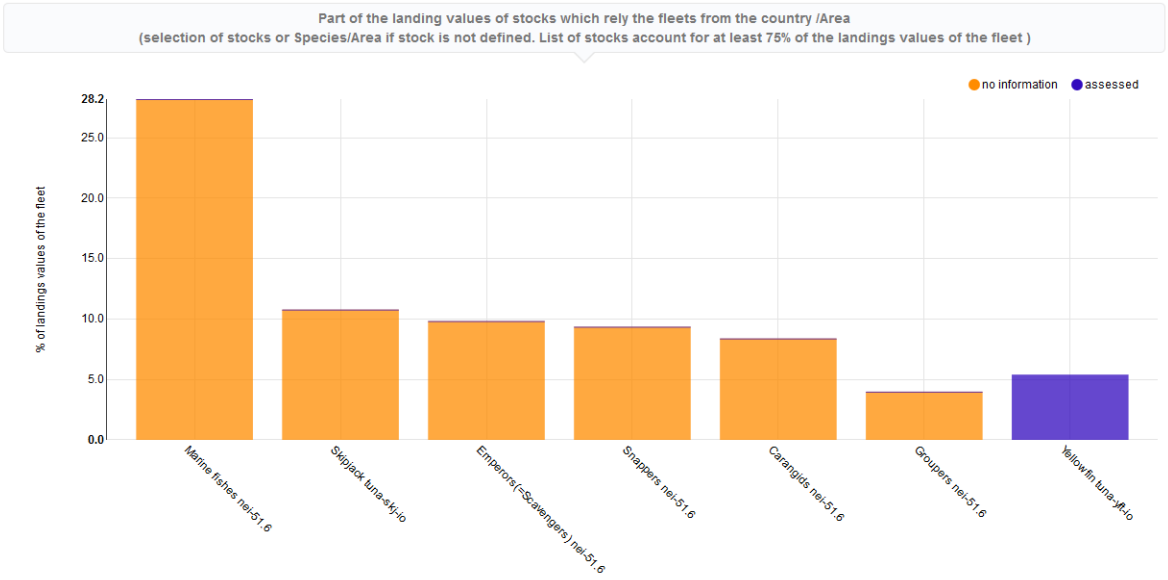


Figure 4.6.1. Lack of information for Mayotte island, many species cannot be linked to stock as there are declared as Nei.

If we want to improve and extend information on balance indicators in the OMRs there is a need to:

1- strengthen tuna stocks assessments
2- improve Fisheries Information system with properly sampled catches at the specie-specific and geographical scale
3- to strengthen RFMos to evaluate other stocks

4.6.2 Economic Data

Martinique, Mayote and Saint Martin did not provide economic data. Hence the economic balance indicator values could not be estimated.

Reunion island provided information for vessel groups (HOK1012 and HOK1218) and French Guiana did not provide information for the DTS1824 fleet segment. France provided information for 10 fleet segments the same number and the same fleet

segments as provided in 2019. Historical data for Spain and France are available for 2 years only (2017 and 2018).

The 2020 Annual Economic Report (STECF 20-06) will provide more details on the economic performance of the fleets in the OMRs.

4.6.3 Technical Data

The Expert group stresses once again that the VUR220 indicator is not an informative or reliable indicator of balance for the small-scale (under 12m) fleet and if used alone it may not be a reliable indicator for any fleet. If used in isolation 89.3% of the small-scale fleet appear out of balance according to the VUR220. Activity of the <12m fleet is not only governed by weather conditions, many operators are part-time, seasonal or occasional fishers. Similarly, using the VUR or VUR220 indicators to assess balance for large scale vessels such as pole and line vessels catching tuna, is also likely to be erroneous since their activity may be highly seasonal and related to fish migrations. They are also highly efficient, and there is unlikely to be a direct relationship between resource availability and the amount that they catch.

4.7 Stocks on which fleet segments are reliant – Outermost regions

The stocks on which fleet segments that are indicated to be out of balance are reliant, are given in Table 4.7.1.

The fish stocks on which a fleet segment is reliant is 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 at least 75% of the total value of the landings by that fleet segment. List the fleet segments for which information available does not allow to calculate the above indicators and conclude on balance

Table 4.7.1

Fleet	Species / Stocks that account for t 75% of the total landings values of the fleet
ESP-OFR-DTS-VL2440-NGI-NO-	TIE-34.3.1.3/no information Tonguesole nei-34.3.1.3/no information Angolan flying squid-34.3.1.2/no information Argentine croaker-34.3.1.1/no information Atlantic bigeye-34.3.1.3/no information Atlantic sawtail catshark-27.9.a/no information Banana prawn-34.1.3.2/no information Banana prawn-34.3.1.1/no information Broad skate-34.3.1.2/no information Dana swimcrab-34.1.3.2/no information ELY-34.3.1.1/no information Florida pompano-34.1.3.2/no information Green shrimp-34.3.1.1/no information Peruvian weakfish-34.1.3.2/no information Peruvian weakfish-34.3.1.1/no information YBP-34.3.1.3/no information YRA-34.3.1.3/no information PVQ-34.3.1.3/no information Red codling-34.1.3.2/no information Red codling-34.3.1.1/no information Red codling-34.3.1.2/no information RRS-34.3.1.1/no information Smooth dosinia-34.3.1.1/no information
ESP-OFR-DTS-VL40XX-NGI-NO-	Australian bonito-41.3.1/no information Warehou nei-41.3.1/no information Tonguesole nei-34.3.1.3/no information TIE-47.1.3/no information TIE-47.1.2/no information Threespot flounder-41.3.2/no information Smooth dosinia-34.3.1.1/no information Smooth dosinia-34.1.3.2/no information Red codling-34.3.1.1/no information Red codling-34.1.3.2/no information McCain's skate-34.3.1.1/no information McCain's skate-34.1.3.2/no information McCain's skate-34.1.3.1/no information KHP-41.3.1/no information Grenadiers nei-41.3.2/no information Grenadiers nei-41.3.1/no information Glassy flying squid-47.1.3/no information Glassy flying squid-47.1.2/no information Glassy flying squid-47.1.1/no information Cylindrical razor shell-34.1.3.2/no information Butterfishes nei-41.3.1/no information BGV-41.3.1/no information Angolan flying

	squid-47.1.1/no information Angolan flying squid-47.1.2/no information Angolan flying squid-47.1.3/no information Atlantic butterfish-41.3.1/no information Atlantic butterfish-41.3.2/no information Australian bonito-41.3.2/no information
ESP-OFR-HOK-VL1218-NGI-NO-	Warsaw grouper-34.1.3.1/no information Canary dentex-34.1.3.1/no information gbr_mor/assessed Black seabream-34.1.1.1/no information Canary dentex-34.1.1.1/no information Black seabream-34.1.3.1/no information
ESP-OFR-HOK-VL2440-NGI-NO-	Bleeker smoothbelly sardinella-34.3.1.2/no information Goldstripe sardinella-34.3.1.2/no information Skipjack tuna-34.3.1.2/no information Skipjack tuna-34.3.2/no information Skipjack tuna-34.3.1.1/no information
ESP-OFR-PS-VL40XX-NGI-NO-	Guiana mud shrimp-47.a.0/no information skj-io/no information yft-io/assessed yft-atl/assessed
FRA-OFR-DFN-VL0010-YT--	Marine fishes nei-51.6/no information PWT-51.6/no information Surgeonfishes nei-51.6/no information Carangids nei-51.6/no information Needlefishes, etc. nei-51.6/no information
FRA-OFR-HOK-VL0010-RE--	yft-io/assessed Common dolphinfish-51.7/no information bum-io/no information Wahoo-51.7/no information swo-io/assessed alb-io/no information
FRA-OFR-HOK-VL0010-YT--	Marine fishes nei-51.6/no information skj-io/no information Emperors(=Scavengers) nei-51.6/no information Snappers nei-51.6/no information Carangids nei-51.6/no information yft-io/assessed
FRA-OFR-HOK-VL2440-IWE--	Skipjack tuna-34.3.1/no information yft-atl/assessed
FRA-OFR-PGP-VL0010-RE--	yft-io/assessed bum-io/no information Common dolphinfish-51.7/no information Spiny lobsters nei-51.7/no information Surgeonfishes nei-51.7/no information Wahoo-51.7/no information Clupeoids nei-51.7/no information Spanner crab-51.7/no information Carangids nei-51.7/no information
FRA-OFR-PGP-VL0010-YT--	Marine fishes nei-51.6/no information Indian mackerel-51.6/no information Needlefishes, etc. nei-51.6/no information Carangids nei-51.6/no information PWT-51.6/no information Surgeonfishes nei-51.6/no information
FRA-OFR-PS-VL40XX-IWE--	yft-io/assessed yft-atl/assessed skj-io/no information
ITA-OFR-DTS-VL40XX-IWE--	Common octopus-34.3.1.3/no information Common cuttlefish-34.3.1.3/no information Red mullet-34.3.3/no information Mediterranean scaldfish-34.3.3/no information Common cuttlefish-34.3.3/no information
ITA-OFR-PS-VL40XX-IWE--	skj-io/no information
LTU-OFR-TM-VL40XX-NEU--	hom_34/assessed cjm.87/assessed Chub mackerel-34.1.3.2/no information Chub mackerel-34.3.1.1/no information

5 TASK 6 -STOCKS ON WHICH FLEET SEGMENTS ARE RELIANT – ALL REGIONS

ANNEX III lists for each Member State, those fleet segments that according to the most updated set of data (2017 or later if available) 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.

Annex III is available both as a Table in Microsoft word and as a Microsoft Excel workbook.

6 CONTACT DETAILS OF EWG-20-11 PARTICIPANTS

[1] - Information on EWG participant's 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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7 LIST OF ANNEXES

Annex I – Methods of calculating indicators and trends

Annex I A – Biological indicator stock reference list

Annex I B – SAR stock selection

Annex II - Comparison of indicator values

Annex III - Stocks on which fleet segments are reliant

Annex IV - Contract report Bio Indicators

8 LIST OF BACKGROUND DOCUMENTS

Background documents are published on the meeting's web site on:
http://stecf.jrc.ec.europa.eu/web/stecf/ewg2011

List of background documents:

EWG-20-11 – Doc 1 - Declarations of invited and JRC experts (see also section 6 of this report – List of participants)

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 19-13). Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-11286-0, doi:10.2760/300448, JRC119006

https://stecf.jrc.ec.europa.eu/documents/43805/2489852/STECF+19-13+-+Balance+Capacity.pdf/ba686c25-169e-4df3-b5ba-741996dcd79d

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

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52014DC0545

ANNEXES

Annex I - Methods of calculating indicators and trends

8.1.1 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, STECF, GFCM, ICCAT, IOTC 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://standardgraphs.ices.dk/stockList.aspx). For Area MBS output from assessments carried out by STECF working group was compiled by JRC (https://stecf.jrc.ec.europa.eu/web/stecf/dd/medbs/sambs). In addition, information on F/Fmsy was scrutinized from GFCM Stock Assessment Forms (http://www.fao.org/gfcm/data/safs/en/) kindly provided by GFCM secretariat. Information on tuna / tuna-like species was obtained from the ICCAT (http://www.iccat.es/en/) and IOTC website (http://www.iotc.org/). In addition, we considered stocks fished by European fleets in NAFO area (www.nafo.int) as well as in SPRFMO (e.g, jack mackerel, www.sprfmo.int). The full indicator time series (2009-2019) was updated based on the most recent assessments available (2019 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 norvegicus*). STECF 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. STECF 18-14 applied the same approach. 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 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.

For Ewg-20-11, due to the covid situation, no new assessment was provided by GFCM. We use the same values as previous year.

The most important issues related to the calculation of indicator values discussed and addressed during the EWG 19-13 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 20-11 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 2016 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*"'.
- 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 3.4.2.
- 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 2014 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.

- EWG 19-13 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 19-13 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.

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 18-14 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.

8.1.2 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 that are biologically vulnerable are being affected by the activities of the fleet segment, 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 european fleets total catches from a stock at risk, the 2014 Balance Indicator Guidelines suggest that this could be treated as an indication of imbalance.

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 either regarding the total catch of the stock or the total catch of the fleet segment. 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 3.3.2.1. 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 stock. 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. 3.3.2.1, 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.

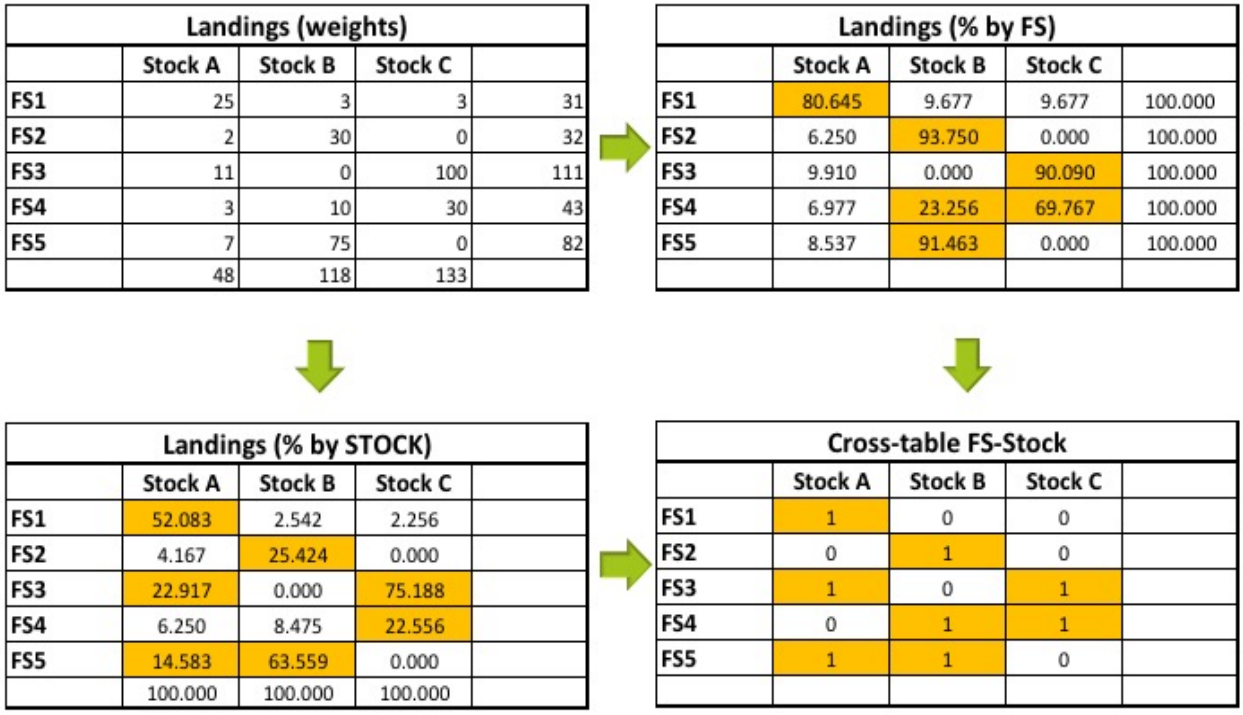


Figure 3.3.2.1. Example of pre-processing of landings data for the computation of the SAR indicator

During the preparatory meeting EWG 20-20, more than 300 stocks were examined. For 2018 Balance Group, 206 items were considered at risk for at least one year of the time period 2009-2017. They are representing over 200 stocks considering that some regulation relates to groups (e.g. Mobula listing in CITES count for one item but al

The total number of Stocks as Risk increased from 2012 to 2017, mainly due to the introduction of new fishing regulation texts including some fishing prohibition to data limited species with scientific concerns but also due to the improvement in quality and availability of some RFMO's assessments (Figures 3.3.2.2-3).

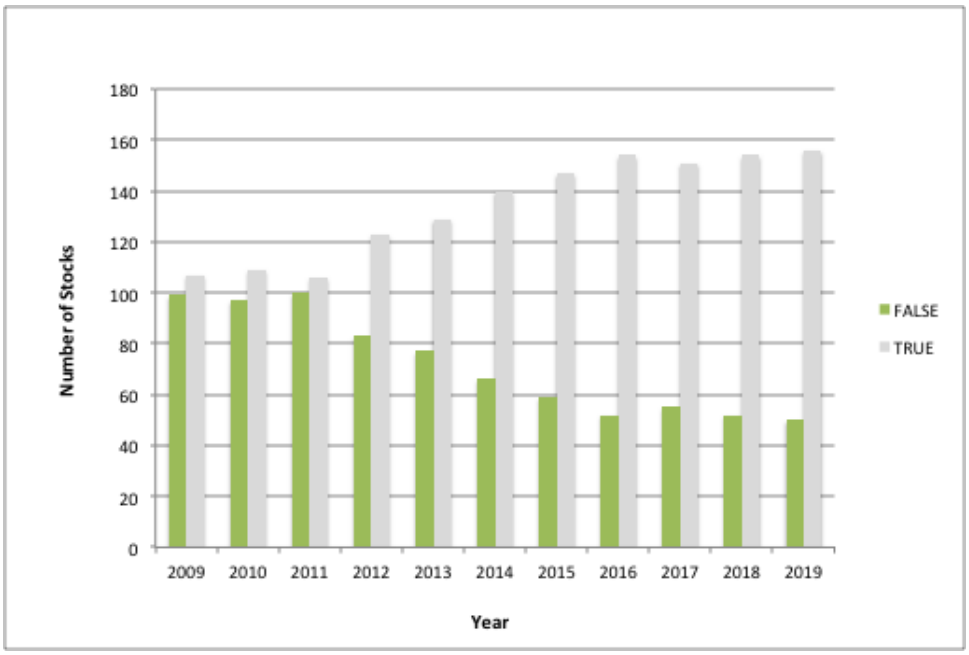


Figure 3.3.2.2 - Distribution of the number of SAR per year (TRUE = Stock is considered at risk; FALSE = Stock is not considered at risk).

For 2018, about a third of the stock were selected based on quantitative data (SSB/B lim), another third was selected due to RFMO's advices based on quantitative data different from Blim and the remaining third were linked to some listing in International conventions (IUCN or CITES).

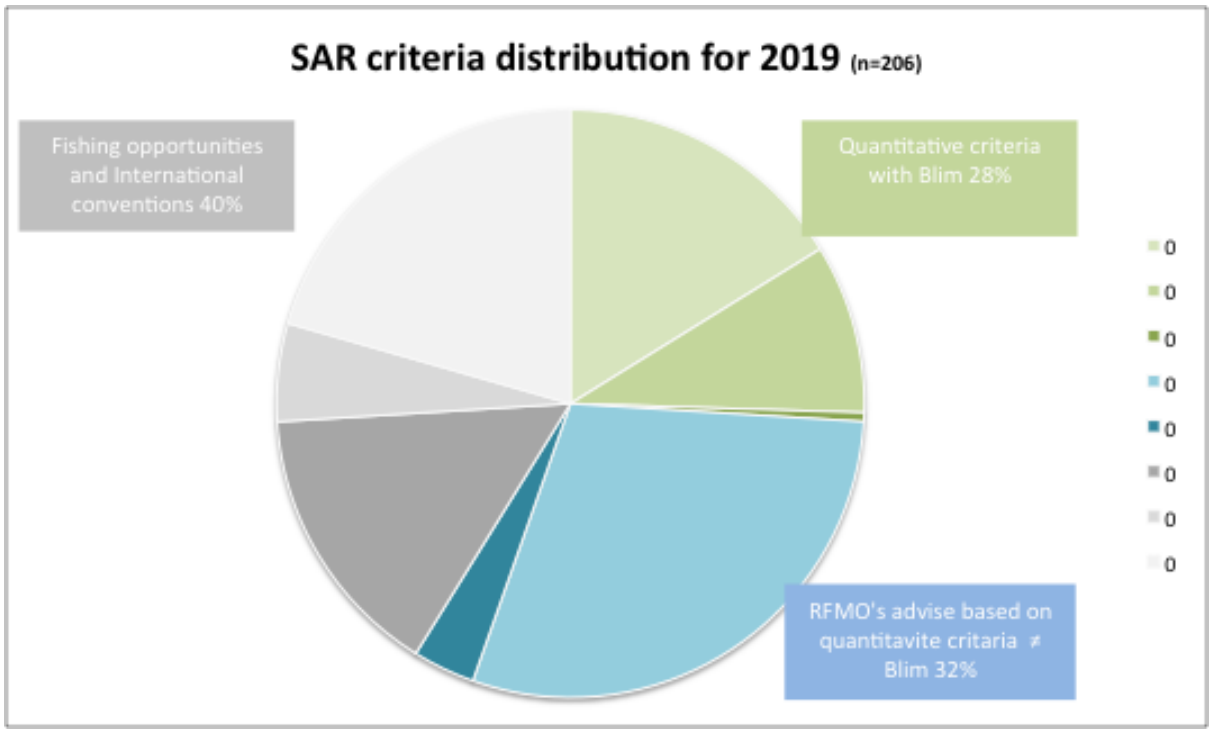


Figure 3.3.2.3 - Distribution of SAR per selecting criteria (a to d) in 2019.

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 SQL coding. The code is designed to compute the SAR indicator value, for the temporal range defined by the input data, for each fleet segment, by crossing-checking DCF landings data provided by JRC with a list of stocks-at-risk prepared by ad hoc contract and validated during the preparatory working.

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 3.3.1). The full list of stocks at risk identified for the assessed fleet segments for years 2009 – 2020 are given in Annex IA to this report.

The most important issues related to the calculation of indicator values discussed and (where possible) addressed during the EWG 19-13 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. The 2018 CECAF-FAO reports were available for evaluation of the SAR this year, which allows an update of the SAR. Madeiran sardinella, Round sardinella, Bonga shad, Atlantic horse mackerel and Cunene horse mackerel from north CECAF were included in the selction as well as Madeiran sardinella, Round sardinella both for north and south CECAF.
- When B_{lim} was not available a proxy of 0.4 SSB_{msy} were agreed to be used for some RFMO's stocks as for instance the inclusion of Striped Marlin (*Tetrapturus audax*) in IOTC.

- 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 2017 SAR stock selection sheet.
- The main issues faced by the group during the EWG 18-14 Prep. Meeting were that in some cases the stock assessments had not yet been released, due to the co-vid crisis ; the deadline taken into acount was the 06/07/2020. 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" (CR) 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. However, in a purspose of evaluation oft he fishing activity on the environement the inclusion of fishes under "endangered" (EN) category as well as some other species (eg. Marine mammals, birds, carals, etc.) category would make sense to be considered.
- SAR definition criteria "c" includes some EC Regulations for fishing opportunity. However the temporal measures listed in such Regulations cannot be included in the SAR selection (eg. Porkupine bank closure from 01-31 May). Specific gear restrictions were not taken into account neither (for calculation simplification purpose, see above).
- The group stressed that the information on SAR criteria "c" and "d" are still heterogeneous from the various relevant reports and selection of stocks still dependent on interpretation, with the exception of criteria "a" and "b" . However, some progress was noticeable since 3 years in term of quality and clarity of the RFMO's advices.
- 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. This is also the case for mainland where some stocks are assessed at by member states (eg. Scallops), these national assessments while available might be considered for estimation. National regulations together with National expert knowledge may also prove to be informative regarding the identification of SARs, especially regarding localised areas and stocks
- There is a need to take into account other International conventions in defining a SAR for fish and other marine organisms (echinoderms, crustaceans, molluscs)? Candidates include the Bonn, Bern, Ospar, Barcelona, SPAW, CMS, etc.
- A 'State of the Stocks' EWG exercise who be profitable to provide a reference document of the status of all stocks worldwide together with their SAR classification. Such an exercise requires convening a small, dedicated expert group. The current process, where the classification by 2 contracted experts is not ideal. The report from that exercise would provide a publically-available reference document which would also increase transparency in the SAR assessment process.

- While the current balance/capacity exercise focuses on fleet segments and exploited fish resources, consideration may need to be given to extending the scope to include fisheries impacts on habitats and ecosystems. Recently, ICES started to worked on a selection of habitats in order to build a VEM's index (Vulnerable Marine Ecosystem) and evaluate the impact of fisheries on ecosystems in the framework of an EU request. However, so far we have a list of VEM but not really linked it to fisheries. This may be worth further consideration as a means to progress along such lines.

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

According the 2014 Commission 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.

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 for EWG 20-11 as:

Net profit / (value of physical capital + value of quota and other fishing rights)

where,

Net profit = (Income from landings + other income + income from leasing out quota) - (crew wage + unpaid labour + energy costs + repair costs + other variable costs + other non-variable costs + lease/rental payments for quota or value of quota + 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 / (value of physical capital);

where,

Net profit = (income from landings + other income) - (crew wage + unpaid labour + energy costs + repair costs+ other variable costs + other non-variable costs + annual depreciation)

Note: Indicators are not calculated if one or more of the essential cost and/or income items are not provided e.g. Net profit is not calculated if consumption of fixed capital is not provided. Conevrsely, RoI is calculated if at least one of the following is provided: income from leasing out quota, lease/rental payments for quota or value of quota and other fishing rights

EWG 20-11 applied the criteria from the 2014 Commission 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.

The RoFTA indicator has been calculated and is presented under section 3.6 for all Member States. RoI is only available for countries that provide data on fishing rights (income, costs /or estimated value of fishing rights).

Indicator Trends

Trends were calculated according to the filters detailed below for the years 2014 – 2018 (Table 3.3.3.1).

Table 3.3.3.1 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 clear trend**
	Slope = 0	Flat / null

* 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 to the 2014 Commission 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.

As recommened by STECF 18-14, the long-term viability analysis of CR/BER, as outlined in the 2014 Balance Indicator Guidelines, was used.

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 = other non-variable costs + annual depreciation + opportunity cost of capital

And,

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.

Indicator Trends

Trends were calculated according to the filters detailed below for the years 2014 – 2018 (Table 3.3.4.1).

Table 3.3.4.1 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 clear trend**
	Slope = 0	Flat / null

* 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 to the 2014 Commission guidelines (COM 2014, 545 final), the Vessel Use Indicators describe how intensively vessels 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 are 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 2014 – 2018 (Table 3.3.5.1).

Table 3.3.5.1 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 clear trend**
	Slope = 0	Flat / null

* 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 to the 2014 Commission guidelines (COM 2014, 545 final), the 'Vessel Use Indicators' describe how intensively vessels in a fleet segment are being utilised. One of these Vessel Use Indicators is the Vessel Utlilisation Ratio (VUR). This indicator concerns the average activity levels of vessels that fished at least once during the year, taking into account 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 a theoretical maximum Days At Sea (DAS) submitted voluntarily by some Member States, and VUR_{220} per fleet segment based on a reference DAS of 220 days.

Indicator Trends

Trends were calculated according to the filters detailed below for the years 2014 – 2018 (Table 3.3.6.1).

Table 3.3.6.1 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

* 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.

Annex IA – Biological Indicator Stock Reference List

The reference list shown below is currently used to divide commercial landings data at species level into stocks. 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 20-11.

species_code	fishstock	sub_division_fao	splitting_value
ANF	ank.27.78abd	27.7.A	3.7
ANF	ank.27.78abd	27.7.B	3.7
ANF	ank.27.78abd	27.7.C.1	3.7
ANF	ank.27.78abd	27.7.C.2	3.7
ANF	ank.27.78abd	27.7.D	3.7
ANF	ank.27.78abd	27.7.E	3.7
ANF	ank.27.78abd	27.7.F	3.7
ANF	ank.27.78abd	27.7.G	3.7
ANF	ank.27.78abd	27.7.H	3.7
ANF	ank.27.78abd	27.7.J.1	3.7
ANF	ank.27.78abd	27.7.J.2	3.7
ANF	ank.27.78abd	27.7.K.1	3.7
ANF	ank.27.78abd	27.7.K.2	3.7
ANF	ank.27.78abd	27.8.A	3.7
ANF	ank.27.78abd	27.8.B	3.7
ANF	ank.27.78abd	27.8.D.1	3.7
ANF	ank.27.78abd	27.8.D.2	3.7
ANF	ank.27.8c9a	27.8.C	2.5
ANF	ank.27.8c9a	27.9.A	2.5
ANF	mon.27.78abd	27.7.A	1.4
ANF	mon.27.78abd	27.7.B	1.4
ANF	mon.27.78abd	27.7.C.1	1.4
ANF	mon.27.78abd	27.7.C.2	1.4

ANF	mon.27.78abd	27.7.D	1.4
ANF	mon.27.78abd	27.7.E	1.4
ANF	mon.27.78abd	27.7.F	1.4
ANF	mon.27.78abd	27.7.G	1.4
ANF	mon.27.78abd	27.7.H	1.4
ANF	mon.27.78abd	27.7.J.1	1.4
ANF	mon.27.78abd	27.7.J.2	1.4
ANF	mon.27.78abd	27.7.K.1	1.4
ANF	mon.27.78abd	27.7.K.2	1.4
ANF	mon.27.78abd	27.8.A	1.4
ANF	mon.27.78abd	27.8.B	1.4
ANF	mon.27.78abd	27.8.D.1	1.4
ANF	mon.27.78abd	27.8.D.2	1.4
ANF	mon.27.8c9a	27.8.C	1.7
ANF	mon.27.8c9a	27.9.A	1.7
CAP	cap.27.1-2	27.2.A.1	3
CAP	cap.27.1-2	27.2.A.2	3
CAP	cap.27.2a514	27.2.A.1	1.5
CAP	cap.27.2a514	27.2.A.2	1.5
COD	cod.27.1-2	27.1.A	1
COD	cod.27.1-2	27.1.B	1
COD	cod.27.1-2	27.2.A.1	1
COD	cod.27.1-2	27.2.A.2	1
COD	cod.27.1-2	27.2.B.1	1
COD	cod.27.1-2	27.2.B.2	1
COD	cod.27.1-2coast	27.1.A	21.4
COD	cod.27.1-2coast	27.1.B	21.4
COD	cod.27.1-2coast	27.2.A.1	21.4
COD	cod.27.1-2coast	27.2.A.2	21.4
COD	cod.27.1-2coast	27.2.B.1	21.4
COD	cod.27.1-2coast	27.2.B.2	21.4
HER	her.27.1-24a514a	27.4.A	1.5
HER	her.27.1-24a514a	27.5.A.1	1.1
HER	her.27.1-24a514a	27.5.A.2	1.1
HER	her.27.20-24	27.3.A	8.5
HER	her.27.3a47d	27.3.A	1.1
HER	her.27.3a47d	27.4.A	3.2
HER	her.27.5a	27.5.A.1	13
HER	her.27.5a	27.5.A.2	13
HER	her.27.irls	27.7.A	1.4
HER	her.27.nirs	27.7.A	3.4
HKE	hke-gsa01_03	SA 1	2
HKE	hke-gsa01_03	SA 3	2

HKE	hke-gsa01_05_06_07	SA 1	2
HKE	hke-gsa01_05_06_07	SA 5	2
HKE	hke-gsa01_05_06_07	SA 6	2
HKE	hke-gsa01_05_06_07	SA 7	2
HKE	hke-gsa02_03_04_05	SA 3	2
HKE	hke-gsa02_03_04_05	SA 5	2
HKE	hke-gsa06	SA 6	2
HKE	hke-gsa07	SA 7	2
HKE	hke-gsa09	SA 9	2
HKE	hke-gsa09_10_11	SA 9	2
HKE	hke-gsa17_18	SA 17	2
HKE	hke-gsa17_18	SA 18	2
HKE	hke-gsa17_18_stecf	SA 17	2
HKE	hke-gsa17_18_stecf	SA 18	2
LEZ	ldb.27.8c9a	27.8.C	1.3
LEZ	ldb.27.8c9a	27.9.A	1.3
LEZ	meg.27.8c9a	27.8.C	5
LEZ	meg.27.8c9a	27.9.A	5
MNZ	ank.27.78abd	27.7.A	3.7
MNZ	ank.27.78abd	27.7.B	3.7
MNZ	ank.27.78abd	27.7.C.1	3.7
MNZ	ank.27.78abd	27.7.C.2	3.7
MNZ	ank.27.78abd	27.7.D	3.7
MNZ	ank.27.78abd	27.7.E	3.7
MNZ	ank.27.78abd	27.7.F	3.7
MNZ	ank.27.78abd	27.7.G	3.7
MNZ	ank.27.78abd	27.7.H	3.7
MNZ	ank.27.78abd	27.7.J.1	3.7
MNZ	ank.27.78abd	27.7.J.2	3.7
MNZ	ank.27.78abd	27.7.K.1	3.7
MNZ	ank.27.78abd	27.7.K.2	3.7
MNZ	ank.27.78abd	27.8.A	3.7
MNZ	ank.27.78abd	27.8.B	3.7
MNZ	ank.27.78abd	27.8.D.1	3.7
MNZ	ank.27.78abd	27.8.D.2	3.7
MNZ	ank.27.8c9a	27.8.C	2.5
MNZ	ank.27.8c9a	27.9.A	2.5
MNZ	ank-gsa05	SA 5	2
MNZ	ank-gsa06	SA 6	2
MNZ	mon.27.78abd	27.7.A	1.4
MNZ	mon.27.78abd	27.7.B	1.4
MNZ	mon.27.78abd	27.7.C.1	1.4
MNZ	mon.27.78abd	27.7.C.2	1.4

MNZ	mon.27.78abd	27.7.D	1.4
MNZ	mon.27.78abd	27.7.E	1.4
MNZ	mon.27.78abd	27.7.F	1.4
MNZ	mon.27.78abd	27.7.G	1.4
MNZ	mon.27.78abd	27.7.H	1.4
MNZ	mon.27.78abd	27.7.J.1	1.4
MNZ	mon.27.78abd	27.7.J.2	1.4
MNZ	mon.27.78abd	27.7.K.1	1.4
MNZ	mon.27.78abd	27.7.K.2	1.4
MNZ	mon.27.78abd	27.8.A	1.4
MNZ	mon.27.78abd	27.8.B	1.4
MNZ	mon.27.78abd	27.8.D.1	1.4
MNZ	mon.27.78abd	27.8.D.2	1.4
MNZ	mon.27.8c9a	27.8.C	1.7
MNZ	mon.27.8c9a	27.9.A	1.7
MNZ	mon-gsa01_05_06_07	SA 5	2
MNZ	mon-gsa01_05_06_07	SA 6	2
MON	ank.27.78abd	27.7.A	3.7
MON	ank.27.78abd	27.7.B	3.7
MON	ank.27.78abd	27.7.C.1	3.7
MON	ank.27.78abd	27.7.C.2	3.7
MON	ank.27.78abd	27.7.D	3.7
MON	ank.27.78abd	27.7.E	3.7
MON	ank.27.78abd	27.7.F	3.7
MON	ank.27.78abd	27.7.G	3.7
MON	ank.27.78abd	27.7.H	3.7
MON	ank.27.78abd	27.7.J.1	3.7
MON	ank.27.78abd	27.7.J.2	3.7
MON	ank.27.78abd	27.7.K.1	3.7
MON	ank.27.78abd	27.7.K.2	3.7
MON	ank.27.78abd	27.8.A	3.7
MON	ank.27.78abd	27.8.B	3.7
MON	ank.27.78abd	27.8.D.1	3.7
MON	ank.27.78abd	27.8.D.2	3.7
MON	mon.27.78abd	27.7.A	1.4
MON	mon.27.78abd	27.7.B	1.4
MON	mon.27.78abd	27.7.C.1	1.4
MON	mon.27.78abd	27.7.C.2	1.4
MON	mon.27.78abd	27.7.D	1.4
MON	mon.27.78abd	27.7.E	1.4
MON	mon.27.78abd	27.7.F	1.4
MON	mon.27.78abd	27.7.G	1.4
MON	mon.27.78abd	27.7.H	1.4

MON	mon.27.78abd	27.7.J.1	1.4
MON	mon.27.78abd	27.7.J.2	1.4
MON	mon.27.78abd	27.7.K.1	1.4
MON	mon.27.78abd	27.7.K.2	1.4
MON	mon.27.78abd	27.8.A	1.4
MON	mon.27.78abd	27.8.B	1.4
MON	mon.27.78abd	27.8.D.1	1.4
MON	mon.27.78abd	27.8.D.2	1.4
MTS	mts-gsa17	SA 17	2
MTS	mts-gsa17_18	SA 17	2
MUT	mut-gsa15	SA 15	2
MUT	mut-gsa15_16	SA 15	2
MUT	mut-gsa15_16	SA 16	2
MUT	mut-gsa16	SA 16	2
NEP	nep.fu.10	27.4.A	288
NEP	nep.fu.11	27.6.A	4.2
NEP	nep.fu.12	27.6.A	3.4
NEP	nep.fu.13	27.6.A	2.1
NEP	nep.fu.14	27.7.A	21
NEP	nep.fu.15	27.7.A	1.1
NEP	nep.fu.16	27.7.B	1.5
NEP	nep.fu.16	27.7.J.1	1.4
NEP	nep.fu.16	27.7.J.2	1.4
NEP	nep.fu.17	27.7.B	3.2
NEP	nep.fu.19	27.7.A	16.2
NEP	nep.fu.19	27.7.G	8.5
NEP	nep.fu.19	27.7.J.1	3.8
NEP	nep.fu.19	27.7.J.2	3.8
NEP	nep.fu.2021	27.7.G	2.8
NEP	nep.fu.22	27.7.G	1.9
NEP	nep.fu.2627	27.9.A	33.9
NEP	nep.fu.2829	27.9.A	1.3
NEP	nep.fu.30	27.9.A	5.1
NEP	nep.fu.32	27.4.A	42.2
NEP	nep.fu.33	27.4.B	6.3
NEP	nep.fu.34	27.4.B	15.4
NEP	nep.fu.5	27.4.B	5.3
NEP	nep.fu.6	27.4.B	3.4
NEP	nep.fu.7	27.4.A	1.2
NEP	nep.fu.8	27.4.B	3.4
NEP	nep.fu.9	27.4.A	5.9
NOP	nop.27.3a4	27.3.A	1.5
NOP	nop.27.3a4	27.4.A	1.5

NOP	nop.27.3a4	27.4.B	1.5
NOP	nop.27.3a4	27.4.C	1.5
NOP	nop-34-june	27.3.A	3.2
NOP	nop-34-june	27.4.A	3.2
NOP	nop-34-june	27.4.B	3.2
NOP	nop-34-june	27.4.C	3.2
PIL	pil-gsa01	SA 1	2
PIL	pil-gsa01-03	SA 1	2
PIL	pil-gsa22	SA 22	2
PIL	pil-gsa22_23	SA 22	2
PRA	pra.27.3a4a	27.4.A	1
PRA	pra.27.4a	27.4.A	1889.3
REB	reb.2127.dp	21.1	1.1
REB	reb.2127.dp	21.2	1.1
REB	reb.2127.dp	27.12.A.1	1.1
REB	reb.2127.dp	27.12.A.2	1.1
REB	reb.2127.dp	27.12.A.3	1.1
REB	reb.2127.dp	27.12.A.4	1.1
REB	reb.2127.dp	27.12.B	1.1
REB	reb.2127.dp	27.12.C	1.1
REB	reb.2127.dp	27.14.A	1.4
REB	reb.2127.dp	27.14.B.1	1.5
REB	reb.2127.dp	27.14.B.2	1.5
REB	reb.2127.dp	27.5.A.1	1.4
REB	reb.2127.dp	27.5.A.2	1.4
REB	reb.2127.dp	27.5.B.1.A	1.1
REB	reb.2127.dp	27.5.B.1.B	1.1
REB	reb.2127.dp	27.5.B.2	1.1
REB	reb.2127.sp	21.1	17.7
REB	reb.2127.sp	21.2	17.7
REB	reb.2127.sp	27.12.A.1	17.7
REB	reb.2127.sp	27.12.A.2	17.7
REB	reb.2127.sp	27.12.A.3	17.7
REB	reb.2127.sp	27.12.A.4	17.7
REB	reb.2127.sp	27.12.B	17.7
REB	reb.2127.sp	27.12.C	17.7
REB	reb.2127.sp	27.14.A	22.7
REB	reb.2127.sp	27.14.B.1	25.3
REB	reb.2127.sp	27.14.B.2	25.3
REB	reb.2127.sp	27.5.A.1	22.7
REB	reb.2127.sp	27.5.A.2	22.7
REB	reb.2127.sp	27.5.B.1.A	17.7
REB	reb.2127.sp	27.5.B.1.B	17.7

REB	reb.2127.sp	27.5.B.2	17.7
REB	reb.27.14b	27.14.B.1	9.8
REB	reb.27.14b	27.14.B.2	9.8
REB	reb.27.5a14	27.14.A	4.5
REB	reb.27.5a14	27.14.B.1	5
REB	reb.27.5a14	27.14.B.2	5
REB	reb.27.5a14	27.5.A.1	4.5
REB	reb.27.5a14	27.5.A.2	4.5
RED	reb.2127.dp	21.1	1.1
RED	reb.2127.dp	21.2	1.1
RED	reb.2127.dp	27.12.A.1	2.6
RED	reb.2127.dp	27.12.A.2	2.6
RED	reb.2127.dp	27.12.A.3	2.6
RED	reb.2127.dp	27.12.A.4	2.6
RED	reb.2127.dp	27.12.B	2.6
RED	reb.2127.dp	27.12.C	2.6
RED	reb.2127.dp	27.14.A	2.6
RED	reb.2127.dp	27.14.B.1	2.6
RED	reb.2127.dp	27.14.B.2	2.6
RED	reb.2127.dp	27.5.A.1	2.6
RED	reb.2127.dp	27.5.A.2	2.6
RED	reb.2127.dp	27.5.B.1.A	2.6
RED	reb.2127.dp	27.5.B.1.B	2.6
RED	reb.2127.dp	27.5.B.2	2.6
RED	reb.2127.sp	21.1	17.7
RED	reb.2127.sp	21.2	17.7
RED	reb.2127.sp	27.12.A.1	43.9
RED	reb.2127.sp	27.12.A.2	43.9
RED	reb.2127.sp	27.12.A.3	43.9
RED	reb.2127.sp	27.12.A.4	43.9
RED	reb.2127.sp	27.12.B	43.9
RED	reb.2127.sp	27.12.C	43.9
RED	reb.2127.sp	27.14.A	43.9
RED	reb.2127.sp	27.14.B.1	43.9
RED	reb.2127.sp	27.14.B.2	43.9
RED	reb.2127.sp	27.5.A.1	43.9
RED	reb.2127.sp	27.5.A.2	43.9
RED	reb.2127.sp	27.5.B.1.A	43.9
RED	reb.2127.sp	27.5.B.1.B	43.9
RED	reb.2127.sp	27.5.B.2	43.9
RED	reb.27.1-2	27.1.A	1.4
RED	reb.27.1-2	27.1.B	1.4
RED	reb.27.1-2	27.2.A.1	1.4

RED	reb.27.1-2	27.2.A.2	1.4
RED	reb.27.1-2	27.2.B.1	1.4
RED	reb.27.1-2	27.2.B.2	1.4
RED	reg.27.1-2	27.1.A	3.7
RED	reg.27.1-2	27.1.B	3.7
RED	reg.27.1-2	27.2.A.1	3.7
RED	reg.27.1-2	27.2.A.2	3.7
RED	reg.27.1-2	27.2.B.1	3.7
RED	reg.27.1-2	27.2.B.2	3.7
RED	reg.27.561214	27.12.A.1	1.7
RED	reg.27.561214	27.12.A.2	1.7
RED	reg.27.561214	27.12.A.3	1.7
RED	reg.27.561214	27.12.A.4	1.7
RED	reg.27.561214	27.12.B	1.7
RED	reg.27.561214	27.12.C	1.7
RED	reg.27.561214	27.14.A	1.7
RED	reg.27.561214	27.14.B.1	1.7
RED	reg.27.561214	27.14.B.2	1.7
RED	reg.27.561214	27.5.A.1	1.7
RED	reg.27.561214	27.5.A.2	1.7
RED	reg.27.561214	27.5.B.1.A	1.7
RED	reg.27.561214	27.5.B.1.B	1.7
RED	reg.27.561214	27.5.B.2	1.7
SAN	san.sa.1r	27.4.B	1.8
SAN	san.sa.1r	27.4.C	1.3
SAN	san.sa.2r	27.4.B	7.2
SAN	san.sa.2r	27.4.C	5
SAN	san.sa.3r	27.3.A	1
SAN	san.sa.3r	27.4.A	1.1
SAN	san.sa.3r	27.4.B	3.7
SAN	san.sa.4	27.4.A	9.5
SAN	san.sa.4	27.4.B	31.3
SAN	san.sa.6	27.3.A	585.3

ANNEX IB - SAR stock selection

See supporting Excel file

ANNEX II - Comparison of indicator values

See supporting Excel file

ANNEX III – Stocks on which fleet segments are reliant

This Annex lists for each Member State, those fleet segments that according to the most updated set of data (2017 or later if available) 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.

See also supporting Excel file

For Area27

fleet_code	major_stocks
BEL-NAO-PMP-VL1824-NGI--	Great Atlantic scallop-27.7.d/no information sol.27.4/assessed
BEL-NAO-TBB-VL1824-NGI--	Common shrimp-27.4.c/no information sol.27.7d/assessed ple.27.7d/assessed sol.27.4/assessed
BEL-NAO-TBB-VL2440-NGI--	ple.27.420/assessed sol.27.7fg/assessed sol.27.7d/assessed sol.27.8ab/assessed sol.27.4/assessed ple.27.7d/assessed mon.27.78abd/assessed Common cuttlefish-27.7.e/no information cod.27.47d20/assessed lem.27.3a47d/no information tur.27.4/assessed bll.27.3a47de/no information Common cuttlefish-27.7.d/no information sol.27.7h-k/assessed
DEU-NAO-DFN-VL1218-NGI--	sol.27.4/assessed cod.27.47d20/assessed Common sole-27.3.a/no information
DEU-NAO-DFN-VL2440-NGI--	anf.27.3a46/no information Deep-sea red crab-27.6.b/no information Anglerfishes nei-27.7.c/no information sol.27.4/assessed cod.27.47d20/assessed
DEU-NAO-DTS-VL1012-NGI--	ple.27.24-32/no information cod.27.22-24/assessed ple.27.21-23/assessed her.27.20-24/assessed
DEU-NAO-DTS-VL1218-NGI--	ple.27.21-23/assessed cod.27.22-24/assessed her.27.20-24/assessed spr.27.22-32/assessed
DEU-NAO-DTS-VL1824-NGI--	ple.27.420/assessed nep.fu.8/assessed nep.fu.6/assessed tur.27.4/assessed ple.27.21-23/assessed cod.27.22-24/assessed nep.fu.5/no information ple.27.24-32/no information nep.fu.33/no information
DEU-NAO-DTS-VL2440-NGI--	pok.27.3a46/assessed cod.27.47d20/assessed hke.27.3a46-8abd/assessed ple.27.420/assessed had.27.46a20/assessed
DEU-NAO-DTS-VL40XX-NGI--	Greenland halibut-27.14.b/no information Atlantic cod-27.2.b/no information cod.27.1-2/assessed Atlantic cod-27.2.a/no information Greenland halibut-21.1.c/no information pok.27.3a46/assessed Atlantic cod-27.14.b/no information
DEU-NAO-PG-VL0010-NGI--	Pike-perch-27.3.d.24/no information cod.27.22-24/assessed her.27.20-24/assessed European perch-27.3.d.24/no information European eel-27.3.d.24/no information Roach-27.3.d.24/no information ple.27.21-23/assessed
DEU-NAO-PG-VL1012-NGI--	her.27.20-24/assessed cod.27.22-24/assessed ple.27.21-23/assessed
DEU-NAO-TBB-VL1218-NGI--	Common shrimp-27.4.b/no information
DEU-NAO-TBB-VL1824-NGI--	Common shrimp-27.4.b/no information
DEU-NAO-TBB-VL2440-NGI--	sol.27.4/assessed ple.27.420/assessed tur.27.4/assessed
DNK-NAO-DTS-VL1012-NGI--	nep.fu.3-4/assessed cod.27.21/no information European plaice-27.3.a/no information cod.27.22-24/assessed ple.27.21-23/assessed spr.27.4/no information
DNK-NAO-DTS-VL2440-NGI--	cod.27.47d20/assessed pra.27.3a4a/assessed anf.27.3a46/no information ple.27.420/assessed pok.27.3a46/assessed hke.27.3a46-8abd/assessed nep.fu.3-4/assessed lem.27.3a47d/no information cod.27.21/no information
DNK-NAO-PGP-VL0010-NGI--	European plaice-27.3.a/no information cod.27.21/no information Lumpfish(=Lumpsucker)-27.3.a/no information Common sole-27.3.a/no information cod.27.22-24/assessed European lobster-27.4.b/no information cod.27.47d20/assessed European eel-27.3.c.22/no information European eel-27.3.d.24/no information European eel-27.3.b.23/no information European flat oyster-27.4.b/no information ple.27.420/assessed ple.27.21-23/assessed Lumpfish(=Lumpsucker)-27.4.b/no information European eel-27.3.a/no information sol.27.4/assessed Atlantic mackerel-27.3.a/no information fle.27.3a4/no information Edible crab-27.4.b/no information Common prawn-27.3.c.22/no information
DNK-NAO-PGP-VL1012-NGI--	cod.27.22-24/assessed European plaice-27.3.a/no information ple.27.21-23/assessed cod.27.21/no

	information Turbot-27.3.c.22/no information ple.27.420/assessed sal.27.22-31/no information sol.27.4/assessed Lumpfish(=Lumpsucker)-27.4.b/no information sol.27.20-24/assessed bll.27.22-32/no information
DNK-NAO-PGP-VL1218-NGI--	ple.27.420/assessed sol.27.4/assessed cod.27.47d20/assessed tur.27.4/assessed hke.27.3a46-8abd/assessed cod.27.21/no information European plaice-27.3.a/no information
DNK-NAO-PMP-VL0010-NGI--	European plaice-27.3.a/no information cod.27.21/no information ple.27.21-23/assessed nep.fu.3-4/assessed cod.27.22-24/assessed Common sole-27.3.a/no information Lumpfish(=Lumpsucker)-27.3.a/no information pol.27.3a4/no information Turbot-27.3.c.22/no information ple.27.420/assessed
DNK-NAO-PMP-VL1012-NGI--	European plaice-27.3.a/no information ple.27.21-23/assessed Atlantic cod-27.3.d.25/no information nep.fu.3-4/assessed cod.27.21/no information cod.27.22-24/assessed ple.27.420/assessed lem.27.3a47d/no information Common sole-27.3.a/no information
DNK-NAO-PMP-VL1824-NGI--	ple.27.420/assessed hke.27.3a46-8abd/assessed cod.27.47d20/assessed sol.27.4/assessed anf.27.3a46/no information tur.27.4/assessed
DNK-NAO-TM-VL1218-NGI--	spr.27.4/no information spr.27.22-32/assessed san.sa.1r/no information san.sa.3r/no information her.27.20-24/assessed
ESP-NAO-DFN-VL1012-NGI-NO-	Spotless smooth-hound-27.9.a/no information Streamer bass-27.8.c/no information Taquilla clams-27.8.c/no information Threadsail filefish-27.9.a/no information Timucu-27.9.a/no information TNZ-27.9.a/no information Two-finned round herring-27.9.a/no information USY-27.8.c/no information SFH-27.9.a/no information Sevenstar flying squid-27.9.a/no information Seabasses nei-27.8.c/no information Scyliorhinus tokubee-27.9.a/no information Scotsman seabream-27.8.c/no information Rough scad-27.8.c/no information Rough leatherjackets-27.9.a/no information Rosefishes nei-27.8.c/no information Red velvetfish-27.9.a/no information Red drum-27.8.c/no information RDV-27.8.c/no information RDU-27.8.c/no information QUU-27.8.c/no information QSE-27.9.a/no information Precious corals nei-27.9.a/no information Port Jackson shark-27.8.c/no information Porgies-27.9.a/no information Porgies-27.8.c/no information PNA-27.8.c/no information Plunderfish-27.9.a/no information Pickhandle barracuda-27.8.c/no information Parona leatherjacket-27.8.c/no information Panama hake-27.9.a/no information Pacific sleeper shark-27.9.a/no information Pacific burrfish-27.9.a/no information OYM-27.9.a/no information Otophidium chickcharney-27.9.a/no information Ornate spiny lobster-27.8.c/no information OJB-27.9.a/no information New Zealand mussel-27.9.a/no information New Zealand mussel-27.8.c/no information MXG-27.9.a/no information MWX-27.8.c/no information MVC-27.9.a/no information Monocle breams-27.8.c/no information MKC-27.9.a/no information Meuschenia australis-27.9.a/no information LDE-27.9.a/no information JHX-27.9.a/no information JDE-27.8.c/no information JDA-27.8.c/no information Japanese nylon shrimp-27.9.a/no information Inimicus cuvieri-27.9.a/no information Indo-Pacific king mackerel-27.8.c/no information Hooktooth shark-27.8.c/no information HLE-27.9.a/no information Gulf grouper-27.9.a/no information Guinea shrimp-27.8.c/no information GTN-27.9.a/no information Grey smooth-hound-27.9.a/no information Goldstripe sardinella-27.8.c/no information Goldlined seabream-27.8.c/no information GMU-27.9.a/no information Glauert's anglerfish-27.8.c/no information GJE-27.9.a/no information Giant swimcrab-27.8.c/no information Giant catfish-27.9.a/no information GCO-27.9.a/no information FRE-27.8.c/no information Fluted giant clam-27.8.c/no information Flabellum cup corals nei-27.9.a/no information DVA-27.8.c/no information Dogfishes nei-27.8.c/no information Disc-fin squids nei-27.9.a/no information Dana swimcrab-27.9.a/no information CYS-27.9.a/no information Congiopodus peruvianus-27.9.a/no information Common silver-biddy-27.8.c/no information Common galatea clam-27.9.a/no information Comb shrimp-27.8.c/no information Cobia-27.9.a/no information Cero-27.8.c/no information Callinectes swimcrabs nei-27.9.a/no information California lizardfish-27.9.a/no information Cabinza grunt-27.8.c/no information Butter hamlet-27.8.c/no information Brushtooth lizardfish-27.9.a/no information Broadnose skate-27.9.a/no information Boeseman croaker-27.9.a/no information Boeseman croaker-27.8.c/no information Blue and gold fusilier-27.8.c/no information BLS-27.8.c/no information Blood-stained turbo-27.8.c/no information Black stone crab-27.8.c/no information Blackspotted catshark-27.9.a/no information Blackspot skate-27.8.c/no information Black seabass-27.9.a/no information Black seabass-27.8.c/no information Belanger's croaker-27.9.a/no information Belanger's croaker-27.8.c/no information Barndoor skate-27.9.a/no information Ayu sweetfish-27.9.a/no information Atlantic surf clam-27.9.a/no information Atlantic searobins-27.9.a/no information Atlantic searobins-27.8.c/no information Atlantic seabasses-27.8.c/no information Atlantic sabretooth anchovy-27.9.a/no information Atlantic bay scallop-27.8.c/no information American shad-27.9.a/no information American shad-27.8.c/no information American sea scallop-27.9.a/no information White barbel-27.8.c/no information Yellowtip halfbeak-27.8.c/no information Winter flounder-27.8.c/no information Whitespotted smooth-hound-27.9.a/no information White mullet-27.9.a/no information Shads nei-27.8.c/no information Shortbelly eel-27.8.c/no information Slender bullseye-27.9.a/no information South Australian cobbler-27.8.c/no information South Australian cobbler-27.9.a/no information YFG-27.9.a/no information YFK-27.9.a/no information YKG-27.9.a/no information White croaker-27.9.a/no information Allen's tubelip-27.8.c/no information Spadenose shark-27.8.c/no information

ESP-NAO-DFN-VL1218-NGI-NO-	USO-27.8.c/no information MYA-27.9.a/no information Mutton snapper-27.8.c/no information Mullet snapper-27.9.a/no information Mountain mullet-27.9.a/no information Monocle breams-27.9.a/no information Mojarras(=Silver-biddies) nei-27.8.c/no information MKC-27.9.a/no information MEI-27.8.c/no information McCain's skate-27.8.c/no information LPW-27.8.c/no information LPE-27.9.a/no information Longtail skate-27.8.c/no information Longfin trevally-27.9.a/no information Longfin squid-27.9.a/no information Longfin mullet-27.9.a/no information Leaping bonito-27.8.c/no information Largescale flounder-27.9.a/no information Lancer stargazer-27.9.a/no information Lake sturgeon-27.8.c/no information Kolibri shrimp-27.8.c/no information King crab-27.9.a/no information King crab-27.8.c/no information Karanteen seabream-27.9.a/no information JRT-27.8.c/no information JRA-27.9.a/no information JBI-27.9.a/no information Japanese scad-27.9.a/no information January octopus-27.8.c/no information Intermediate scabbardfish-27.8.c/no information Indo-Pacific king mackerel-27.9.a/no information Indo-Pacific king mackerel-27.8.c/no information ICI-27.8.c/no information Horse mussels nei-27.8.c/no information Hapuku wreckfish-27.8.c/no information Gurgesiella atlantica-27.9.a/no information Gulf herring-27.8.c/no information Guinea shrimp-27.9.a/no information Guinea shrimp-27.8.c/no information Guinean barracuda-27.9.a/no information Greeneyes-27.9.a/no information Goldlined seabream-27.8.c/no information Goatfishes-27.9.a/no information Goatfishes-27.8.c/no information GNS-27.8.c/no information Glassy flying squid-27.8.c/no information Giant swimcrab-27.9.a/no information Giant keyhole sand dollar-27.8.c/no information GHG-27.9.a/no information GFG-27.9.a/no information Geelbek croaker-27.8.c/no information GAZ-27.9.a/no information Gay's little venus-27.9.a/no information Gay's little venus-27.8.c/no information Gavialiceps taeniola-27.9.a/no information Gasterosteus crenobiontus-27.8.c/no information Garnet coral-27.9.a/no information FRC-27.8.c/no information FBA-27.8.c/no information English sole-27.9.a/no information Emperor red snapper-27.9.a/no information Emperor red snapper-27.8.c/no information EJU-27.8.c/no information Eaton's skate-27.8.c/no information DUH-27.8.c/no information Dombey's tagelus-27.9.a/no information Dolly varden-27.9.a/no information Dogfishes nei-27.9.a/no information Dogfishes nei-27.8.c/no information Dictyosoma burgeri-27.8.c/no information Deep-water mud lobster-27.8.c/no information Deep-sea smelt-27.9.a/no information Corsula-27.8.c/no information Coral catshark-27.9.a/no information Coral catshark-27.8.c/no information Coral catshark-27.8.b/no information Coney-27.8.c/no information Common snook-27.9.a/no information Common silver-biddy-27.9.a/no information Common silver-biddy-27.8.c/no information Comb shrimp-27.9.a/no information Comb shrimp-27.8.c/no information Collichthys lucidus-27.9.a/no information Cobia-27.9.a/no information Cloudy catshark-27.8.c/no information Chilean sea urchin-27.9.a/no information CFL-27.9.a/no information Cero-27.9.a/no information CCA-27.8.c/no information Castaneta-27.9.a/no information Cassava croaker-27.9.a/no information Caribbean reef octopus-27.8.c/no information Carcharhinus sharks nei-27.8.c/no information Cape rock lobster-27.8.c/no information Cape lobster-27.8.c/no information Callinectes swimcrabs nei-27.9.a/no information Calico scallop-27.9.a/no information Calico scallop-27.8.c/no information BYR-27.8.c/no information BSL-27.8.c/no information Broadnose catshark-27.8.c/no information Brazilian sardinella-27.9.a/no information Brazilian menhaden-27.9.a/no information Bothrocara alalongum-27.8.c/no information Boeseman croaker-27.9.a/no information Boeseman croaker-27.8.c/no information BMO-27.9.a/no information Blacktip reef shark-27.9.a/no information Blachea xenobranchialis-27.9.a/no information Bilabria ornata-27.8.c/no information Biglip grunt-27.9.a/no information Bighead carp-27.8.c/no information Bigeyes nei-27.8.c/no information BHZ-27.8.c/no information Barred grunt-27.9.a/no information BAA-27.8.c/no information Australian grayling-27.9.a/no information Australian bonito-27.8.c/no information Atlantic silverside-27.8.c/no information Atlantic searobins-27.9.a/no information Atlantic searobins-27.8.c/no information Atlantic seabob-27.9.a/no information Atlantic seabasses-27.9.a/no information ASP-27.8.c/no information Arrow blenny-27.9.a/no information Argentine croaker-27.9.a/no information Argentine croaker-27.8.c/no information AOR-27.9.a/no information AMG-27.9.a/no information American shad-27.9.a/no information American shad-27.8.c/no information American sea scallop-27.8.c/no information Alaska plaice-27.8.c/no information Alabama shad-27.9.a/no information AJS-27.8.c/no information AGG-27.9.a/no information Mystriophis porphyreus-27.9.a/no information Nansenia ardesiaca-27.8.c/no information NKG-27.9.a/no information Northern red snapper-27.9.a/no information Northern smoothtounge-27.9.a/no information Oarfishes nei-27.9.a/no information ORE-27.9.a/no information Other-27.8.c/no information OVA-27.8.c/no information Pacific burrfish-27.9.a/no information Pacific ladyfish-27.8.c/no information Pacific ladyfish-27.9.a/no information Pacific scabbardfish-27.8.c/no information Panama hake-27.9.a/no information Panama spadefish-27.8.c/no information Panatella silverside-27.9.a/no information Patagonian skate-27.8.c/no information Peruvian rock seabass-27.8.c/no information Peruvian rock seabass-27.9.a/no information Picarels, etc. nei-27.8.c/no information Pickhandle barracuda-27.8.c/no information QOI-27.9.a/no information Queen conch-27.8.c/no information Rainbow smelt-27.9.a/no information Raja macrocauda-27.8.c/no information Red king crab-27.8.c/no information Red rock lobster-27.9.a/no information Rock grouper-27.9.a/no information Rosefishes nei-27.8.c/no information Rosefishes nei-27.9.a/no information Rough scad-27.8.c/no information SAJ-27.9.a/no information Sand flounders nei-27.8.c/no information Seabasses nei-27.8.c/no information Seabasses nei-27.9.a/no information Serra Spanish mackerel-27.8.c/no information Serra Spanish mackerel-27.9.a/no information Sevenstar flying squid-27.8.c/no information Shortjaw leatherjacket-27.8.c/no information Shortraker rockfish-27.9.a/no information Shorttail skate-27.9.a/no information Silver croaker-27.8.c/no

	information Silver seabream-27.8.c/no information Silver whiptail-27.9.a/no information Slantlip eel-27.9.a/no information Slender grouper-27.8.c/no information Slender grouper-27.9.a/no information Small toothed jobfish-27.9.a/no information Smalltooth emperor-27.8.c/no information Smooth nylon shrimp-27.9.a/no information Softshell red crab-27.8.c/no information South Australian cobbler-27.9.a/no information Southern spider crab-27.8.c/no information Southern spider crab-27.9.a/no information Spear lobsters nei-27.8.c/no information Spotfin frogfish-27.8.c/no information Spotless smooth-hound-27.8.c/no information Spotless smooth-hound-27.9.a/no information Spottail seabream-27.8.c/no information Spotty bobtail squid-27.8.c/no information Stout squat lobster-27.9.a/no information Striate limpet-27.8.c/no information Striped bonito-27.8.c/no information SVV-27.8.c/no information Tade gray mullet-27.8.c/no information Tench-27.9.a/no information TEO-27.9.a/no information TOY-27.9.a/no information TTW-27.9.a/no information Tudor's flounder-27.9.a/no information TUP-27.9.a/no information Twobar seabream-27.8.c/no information Twobar seabream-27.9.a/no information Two-finned round herring-27.8.c/no information Two-finned round herring-27.9.a/no information TZP-27.9.a/no information Warthead blenny-27.8.c/no information West coast seabream-27.8.c/no information White croaker-27.9.a/no information Windowpane flounder-27.8.c/no information Windowpane flounder-27.9.a/no information Yellowbelly rockcod-27.8.c/no information Yellow snapper-27.8.c/no information YFL-27.9.a/no information AAL-27.9.a/no information African forktail snapper-27.8.c/no information African forktail snapper-27.9.a/no information African mud s
ESP-NAO-DFN-VL1824-NGI-NO-	Brama spp-27.8.b/no information Coral catshark-27.8.c/no information Coral hind-27.8.c/no information DKU-27.8.c/no information DUH-27.8.c/no information Glassy flying squid-27.8.c/no information Goatfishes-27.8.c/no information Goldstripe sardinella-27.9.a/no information HOU-27.8.c/no information Intermediate scabbardfish-27.8.c/no information January octopus-27.8.c/no information Longfin bonefish-27.8.c/no information Mountain mullet-27.8.c/no information Pacific rock crab-27.8.c/no information Red codling-27.8.b/no information Red codling-27.8.c/no information Rock shrimp-27.8.c/no information Seabasses nei-27.8.c/no information Sharptooth jobfish-27.8.c/no information Twobar seabream-27.8.c/no information Windowpane flounder-27.8.c/no information Brazilian flathead-27.8.c/no information Brownspotted sandfish-27.9.a/no information Brama spp-27.8.c/no information Argentine croaker-27.8.c/no information
ESP-NAO-DFN-VL2440-NGI-NO-	Carcharhinus sharks nei-27.8.c/no information Whitefishes nei-27.8.c/no information Boeseman croaker-27.8.c/no information Glassy flying squid-27.8.c/no information Coral catshark-27.8.c/no information hke.27.8c9a/assessed
ESP-NAO-DRB-VL0010-NGI-NO-	Common edible cockle-27.9.a/no information Pullet carpet shell-27.9.a/no information Japanese carpet shell-27.9.a/no information Banded carpet shell-27.9.a/no information
ESP-NAO-DRB-VL1012-NGI-NO-	Spotless smooth-hound-27.9.a/no information DLX-27.9.a/no information Belanger's croaker-27.9.a/no information Solivomer arenidens-27.9.a/no information Jonah crab-27.9.a/no information
ESP-NAO-DTS-VL1012-NGI-NO-	Indo-Pacific king mackerel-27.9.a/no information Scyliorhinus tokubee-27.9.a/no information Spotless smooth-hound-27.9.a/no information Sand smelts nei-27.9.a/no information GOU-27.9.a/no information Common cuttlefish-27.9.a/no information European squid-27.9.a/no information Great Atlantic scallop-27.9.a/no information
ESP-NAO-DTS-VL1218-NGI-NO-	Spotted eagle ray-27.9.a/no information Striped bonito-27.9.a/no information SUS-27.9.a/no information SUU-27.9.a/no information Swamp ghost crab-27.9.a/no information Timucu-27.9.a/no information Trumpeters nei-27.9.a/no information TTW-27.9.a/no information Tuskfishes nei-27.9.a/no information Twobar seabream-27.9.a/no information Weakfishes nei-27.9.a/no information West coast seabream-27.9.a/no information Windowpane flounder-27.9.a/no information XOX-27.9.a/no information ZSP-27.9.a/no information Shortfin scad-27.9.a/no information Sharptooth smooth-hound-27.9.a/no information Seabasses nei-27.9.a/no information Sandbird octopus-27.9.a/no information Rough turbo-27.9.a/no information Roughtail catshark-27.9.a/no information Red delesseria-27.9.a/no information Red codling-27.9.a/no information Razor mud shrimp-27.9.a/no information PZO-27.9.a/no information Pomfrets, ocean breams nei-27.9.a/no information PNV-27.9.a/no information Plicate conch-27.9.a/no information Pike icefish-27.9.a/no information Pickhandle barracuda-27.9.a/no information Peruvian rock seabass-27.9.a/no information Peacock hind-27.9.a/no information Panga seabream-27.9.a/no information Pacific sleeper shark-27.9.a/no information Pacific pompano-27.9.a/no information Orange-lined triggerfish-27.9.a/no information NXC-27.9.a/no information Nurse shark-27.9.a/no information Northern white shrimp-27.9.a/no information Northern red snapper-27.9.a/no information Northern quahog(=Hard clam)-27.9.a/no information Flat needlefish-27.9.a/no information EFZ-27.9.a/no information EFY-27.9.a/no information ECN-27.9.a/no information DUH-27.9.a/no information DTF-27.9.a/no information Deep-water mud lobster-27.9.a/no information Dana viperfish-27.9.a/no information Daggernose shark-27.9.a/no information Daggerhead breams nei-27.9.a/no information Cross tellin-27.9.a/no information Coral catshark-27.9.a/no information Common silver-biddy-27.9.a/no information Common arm squid-27.9.a/no information Cholga mussel-27.9.a/no information Castaneta-27.9.a/no information Carcharhinus sharks nei-27.9.a/no information Cape rock lobster-27.9.a/no information Cape lobster-27.9.a/no information Callinectes swimcrabs nei-27.9.a/no information Cabezon-27.9.a/no information Burmeister's porpoise-27.9.a/no information Broomtail grouper-27.9.a/no

	information Broadfin sawtail catshark-27.9.a/no information Brightbelly sculpin-27.9.a/no information BNQ-27.9.a/no information Blue squat lobster-27.9.a/no information Blue mackerel-27.9.a/no information BLK-27.9.a/no information Black musselcracker-27.9.a/no information Blackbar hogfish-27.9.a/no information Blackfin goosefish-27.9.a/no information Biglip grunt-27.9.a/no information Barred grunt-27.9.a/no information Argentine menhaden-27.9.a/no information AMJ-27.9.a/no information AJS-27.9.a/no information African forktail snapper-27.9.a/no information Adriatic trout-27.9.a/no information Aconcagua grenadier-27.9.a/no information Mud mantis-27.9.a/no information MQR-27.9.a/no information Mountain mullet-27.9.a/no information Mojarras(=Silver-biddies) nei-27.9.a/no information MKC-27.9.a/no information MIQ-27.9.a/no information Menhadens nei-27.9.a/no information McCain's skate-27.9.a/no information Maputo conger-27.9.a/no information MAO-27.9.a/no information LQJ-27.9.a/no information Longfin squid-27.9.a/no information LOA-27.9.a/no information Lizard mantis-27.9.a/no information LCD-27.9.a/no information Largescale flounder-27.9.a/no information King crab-27.9.a/no information KEA-27.9.a/no information January octopus-27.9.a/no information Indian red shrimp-27.9.a/no information ICI-27.9.a/no information Horned murex-27.9.a/no information HJX-27.9.a/no information Havana box crab-27.9.a/no information Harbour spidercrab-27.9.a/no information Gulf herring-27.9.a/no information Goatfishes-27.9.a/no information Geelbek croaker-27.9.a/no information GEC-27.9.a/no information GDJ-27.9.a/no information Gavialiceps taeniola-27.9.a/no information Freckled driftfish-27.9.a/no information FPJ-27.9.a/no information Silver croaker-27.9.a/no information Silver seabream-27.9.a/no information Slender grouper-27.9.a/no information Slender silver-biddy-27.9.a/no information Smallfin gulper shark-27.9.a/no information SNG-27.9.a/no information Snipefishes nei-27.9.a/no information Sockeye(=Red) salmon-27.9.a/no information Southern spider crab-27.9.a/no information Speckled shrimp-27.9.a/no information Spiny slipper shell-27.9.a/no information Spiny turbots nei-27.9.a/no information
ESP-NAO-DTS-VL1824-NGI-NO-	Arabian red shrimp-27.9.a/no information YLP-27.9.a/no information Yellowspotted skate-27.9.a/no information XOX-27.9.a/no information Windowpane flounder-27.9.a/no information White croaker-27.9.a/no information West coast seabream-27.9.a/no information West African croakers nei-27.9.a/no information Weakfishes nei-27.9.a/no information WEA-27.9.a/no information UTV-27.9.a/no information ULI-27.9.a/no information Twobar seabream-27.9.a/no information Tudor's flounder-27.9.a/no information TTW-27.9.a/no information Trumpeters nei-27.9.a/no information Toadfishes nei-27.9.a/no information Thumbstall squids nei-27.9.a/no information SYN-27.9.a/no information Swordtip squid-27.9.a/no information Striped escolar-27.9.a/no information Spotted eagle ray-27.9.a/no information Spotted dolphins nei-27.9.a/no information Spotless smooth-hound-27.9.a/no information Spiny turbots nei-27.9.a/no information Spiny slipper shell-27.9.a/no information Spadefishes nei-27.9.a/no information Southern spider crab-27.9.a/no information Southeast Atlantic soles nei-27.9.a/no information South Australian cobbler-27.9.a/no information Solenocerid shrimps nei-27.9.a/no information Snipefishes nei-27.9.a/no information Smooth red shrimp-27.9.a/no information Smooth nylon shrimp-27.9.a/no information Small toothed jobfish-27.9.a/no information Slender grouper-27.9.a/no information Silver seabream-27.9.a/no information Silver croaker-27.9.a/no information Sharptooth smooth-hound-27.9.a/no information Sharpnose sharks nei-27.9.a/no information Seventyfour seabream-27.9.a/no information Sevenstar flying squid-27.9.a/no information Seabasses nei-27.9.a/no information Sandbird octopus-27.9.a/no information Rough turbo-27.9.a/no information Rock violet-27.9.a/no information Redmouth grouper-27.9.a/no information Red king crab-27.9.a/no information Red codling-27.9.a/no information Red abalone-27.9.a/no information Randall's threadfin bream-27.9.a/no information Raja macrocauda-27.9.a/no information QZE-27.9.a/no information QOJ-27.9.a/no information PZO-27.9.a/no information Purplehead gamba prawn-27.9.a/no information Puffers nei-27.9.a/no information Psammobatis sand skates nei-27.9.a/no information Pickhandle barracuda-27.9.a/no information Peruvian rock seabass-27.9.a/no information Peacock hind-27.9.a/no information Painted sweetlips-27.9.a/no information Painted spiny lobster-27.9.a/no information Pacific seabobs-27.9.a/no information Pacific scabbardfish-27.9.a/no information Pacific pompano-27.9.a/no information Ornate spiny lobster-27.9.a/no information Olive grouper-27.9.a/no information Oil-vessel triton-27.9.a/no information OIB-27.9.a/no information NXC-27.9.a/no information Nurse shark-27.9.a/no information Nototodarus flying squids nei-27.9.a/no information Northern brown shrimp-27.9.a/no information NLJ-27.9.a/no information New Zealand lobster-27.9.a/no information Needle dogfish-27.9.a/no information Muksun-27.9.a/no information MUJ-27.9.a/no information Mountain mullet-27.9.a/no information Mojarras(=Silver-biddies) nei-27.9.a/no information MNU-27.9.a/no information Metanephrops lobsters nei-27.9.a/no information Meagres nei-27.9.a/no information McCain's skate-27.9.a/no information Maroon stone crab-27.9.a/no information Longfin squid-27.9.a/no information Lizard mantis-27.9.a/no information Largescale flounder-27.9.a/no information Largescale fat snook-27.9.a/no information Lantern fish-27.9.a/no information Kolibri shrimp-27.9.a/no information King weakfish-27.9.a/no information King soldier bream-27.9.a/no information Kicking mantis shrimp-27.9.a/no information KEA-27.9.a/no information Karanteen seabream-27.9.a/no information Juan Fernandez trevally-27.9.a/no information JBI-27.9.a/no information Japanese sand shrimp-27.9.a/no information January octopus-27.9.a/no information Indo-Pacific slender worm-eel-27.9.a/no information Indian red shrimp-27.9.a/no information ILB-27.9.a/no information ICI-27.9.a/no information Humming-bird bobtail squid-27.9.a/no information HTZ-27.9.a/no information HQT-27.9.a/no information Horned murex-27.9.a/no information Hooktooth dogfish-27.9.a/no information

	Havana box crab-27.9.a/no information Harbour spidercrab-27.9.a/no information Hapuku wreckfish-27.9.a/no information Hair crab-27.9.a/no information GTV-27.9.a/no information Goldlined seabream-27.9.a/no information Goatfishes-27.9.a/no information Glassy flying squid-27.9.a/no information Geelbek croaker-27.9.a/no information Gecko catshark-27.9.a/no information GDJ-27.9.a/no information FPJ-27.9.a/no information Flat needlefish-27.9.a/no information FHC-27.9.a/no information EGY-27.9.a/no information EGM-27.9.a/no information EFZ-27.9.a/no information ECN-27.9.a/no information DXQ-27.9.a/no information DUH-27.9.a/no information DTF-27.9.a/no information Doublethread grenadier-27.9.a/no information Dogtooth herring-27.9.a/no information DMK-27.9.a/no information Disc-fin squids nei-27.9.a/no information Deep-water mud lobster-27.9.a/no information Deania dogfishes nei-27.9.a/no information Dana octopus-27.9.a/no information Daggernose shark-27.9.a/no information Daggerhead breams nei-27.9.a/no information CWA-27.9.a/no information Coregonus nilssoni-27.9.a/no information Coral catshark-27.9.a/no information Common silver-biddy-27.9.a/no information Circular sea bisquit-27.9.a/no information CIK-27.9.a/no information Cheilodipterus alleni-27.9.a/no information CCA-27.9.a/no information Castaneta-27.9.a/no information Caribbean spiny lobster-27.9.a/no information Cardinalfishes, etc. nei-27.9.a/no information Carcharhinus sharks nei-27.9.a/no information Cape lobster-27.9.a/no information Callinectes swimcrabs nei-27.9.a/no information BYR-27.9.a/no information BWN-27.9.a/no information BUC-27.9.a/no information Brown king crab-27.9.a/no information Broadfin sawtail catshark-27.9.a/no information Brightbelly sculpin-27.9.a/no information Brazilian groupers nei-27.9.a/no information Brama spp-27.9.a/no information Bocaccio rockfish-27.9.a/no information Bobo mullet-27.9.a/no information Blue squat lobster-27.9.a/no information Blue mackerel-27.9.a/no information Blacksaddle herring-27.9.a/no information Blackbar hogfish-27.9.a/no information Bigscale anchovy-27.9.a/no information Bigeyes nei-27.9.a/no information Bellybutton nautilus-27.9.a/no information BDF-27.9.a/no information BAW-27.9.a/no information Batwing coral crab-27.9.a/no information Barred grunt-27.9.a/no information AVA-27.9.a/no information Atlantic seabob-27.9.a/no information Atlantic sawtail catshark-27.9.a/no information Atlantic bumper-27.9.a/no information Aristeus shrimps nei-27.9.a/no information Argobuccinum argus-27.9.a/no information Argentine croaker-27.9.a/no information Arctic flounder-27.9.a/no information AOC-27.9.a/no information American shad-27.9.a/no information Alaska plaice-27.9.a/no information Akiami paste shrimp-27.9.a/no information AJS-27.9.a/no information African forktail snapper-27.9.a/no information ACA-27.9.a/no information
ESP-NAO-DTS-VL2440-NGI-NO-	Castaneta-27.9.a/no information Giant sea cucumber-27.8.d.2/no information Giant sea cucumber-27.8.c/no information Giant sea cucumber-27.7.c.2/no information Geelbek croaker-27.9.a/no information EFZ-27.9.a/no information DUH-27.9.a/no information DKU-27.8.c/no information DKT-27.8.c/no information Deep-water mud lobster-27.9.a/no information Daggerhead breams nei-27.9.a/no information Daggerhead breams nei-27.8.c/no information Coral catshark-27.9.a/no information Coral catshark-27.8.c/no information Carcharhinus sharks nei-27.8.c/no information Cape lobster-27.9.a/no information Canary moray-27.8.a/no information Brazilian flathead-27.8.c/no information Brama spp-27.8.c/no information Blue squat lobster-27.9.a/no information Blue mackerel-27.8.c/no information Black pomfret-27.9.a/no information Blackmouth croaker-27.9.a/no information Bentnose macoma-27.8.c/no information BAY-27.9.a/no information Atlantic sawtail catshark-27.9.a/no information Atlantic sawtail catshark-27.8.c/no information Aristeus shrimps nei-27.9.a/no information Argentine croaker-27.9.a/no information Alewife-27.9.a/no information Alaska shrimp-27.9.a/no information Akiami paste shrimp-27.9.a/no information AJS-27.9.a/no information African forktail snapper-27.8.c/no information African forktail snapper-27.8.a/no information Yellow goatfish-27.9.a/no information YYC-27.8.c/no information Rough turbo-27.8.a/no information Rock grouper-27.8.c/no information Rhinoceros leatherjacket-27.9.a/no information Rhinoceros leatherjacket-27.8.c/no information Red stumpnose seabream-27.9.a/no information Red codling-27.9.a/no information Razorback scabbardfish-27.8.c/no information Raja macrocauda-27.8.c/no information Raja macrocauda-27.6.a/no information PZO-27.9.a/no information Porgies-27.8.c/no information Pomfrets, ocean breams nei-27.8.c/no information Peruvian rock seabass-27.9.a/no information Peacock hind-27.9.a/no information Pacific scabbardfish-27.9.a/no information Opalescent inshore squid-27.8.c/no information NXC-27.9.a/no information Northern cods nei-27.8.a/no information Northern brown shrimp-27.9.a/no information Needle dogfish-27.9.a/no information McCain's skate-27.9.a/no information Mangrove red snapper-27.8.c/no information Malabar sprat-27.9.a/no information Longfin squid-27.9.a/no information Lizard mantis-27.9.a/no information Largescale flounder-27.9.a/no information Largescale fat snook-27.9.a/no information Jumbo flying squid-27.8.c/no information Japanese sand shrimp-27.9.a/no information Intermediate scabbardfish-27.8.c/no information Indo-Pacific king mackerel-27.9.a/no information ICI-27.8.c/no information Horned murex-27.9.a/no information Harbour spidercrab-27.9.a/no information Goldlined seabream-27.8.c/no information Sao Paulo shrimp-27.9.a/no information Seabasses nei-27.8.c/no information Seabasses nei-27.9.a/no information Sevenstar flying squid-27.9.a/no information Silver seabream-27.9.a/no information Slender grouper-27.8.a/no information Southern spider crab-27.9.a/no information Spiny turbots nei-27.9.a/no information Spotted eagle ray-27.9.a/no information Striped escolar-27.8.c/no information Swordtip squid-27.9.a/no information Trumpeters nei-27.9.a/no information TTW-27.9.a/no information Twobar seabream-27.9.a/no information Two-finned round herring-27.8.c/no information Warsaw grouper-27.8.c/no information Warsaw grouper-27.9.a/no information West coast seabream-27.9.a/no information Whitespotted

	guitarfish-27.9.a/no information Windowpane flounder-27.8.c/no information Windowpane flounder-27.9.a/no information XOX-27.8.c/no information Goatfishes-27.9.a/no information Goatfishes-27.8.c/no information Glow-bellies, splitfins nei-27.8.c/no information Glassy flying squid-27.9.a/no information
ESP-NAO-FPO-VL1012-IC-NO-	MMX-34.1.2/no information Metanephrops lobsters nei-34.1.2/no information Mazzaella laminarioides-34.1.2/no information LWK-34.1.2/no information Lagocephalus wheeleri-34.1.2/no information HUF-34.1.2/no information Antarctic armless flounder-34.1.2/no information BBD-34.1.2/no information CIF-34.1.2/no information RTZ-34.1.2/no information Diaphus effulgens-34.1.2/no information FFY-34.1.2/no information Flabellum cup corals nei-34.1.2/no information FRE-34.1.2/no information Valaam whitefish-34.1.2/no information Trygonorrhina guaneria-34.1.2/no information Spanish hogfish-34.1.2/no information South American freshwater stin-34.1.2/no information DGC-34.1.2/no information RTH-34.1.2/no information Redstripe rockfish-34.1.2/no information PQI-34.1.2/no information Porgies-34.1.2/no information Poeciloconger fasciatus-34.1.2/no information Pickhandle barracuda-34.1.2/no information Otophidium chickcharney-34.1.2/no information
ESP-NAO-FPO-VL1012-NGI-NO-	Taquilla clams-27.9.a/no information BGO-27.9.a/no information Blackfin barracuda-27.8.c/no information Blood-stained turbo-27.9.a/no information Brazilian codling-27.8.c/no information Coccorella atlantica-27.8.c/no information Comb shrimp-27.9.a/no information CPE-27.8.c/no information CYS-27.8.c/no information False white prawn-27.8.c/no information Gray starsnout-27.8.c/no information Grenadiers nei-27.8.c/no information Guinea shrimp-27.9.a/no information Indo-Pacific king mackerel-27.8.c/no information King crab-27.8.c/no information Liza spp-27.8.c/no information LPE-27.8.c/no information Otophidium chickcharney-27.9.a/no information Queen conch-27.8.c/no information Queen conch-27.9.a/no information Serra Spanish mackerel-27.8.c/no information Sevenstar flying squid-27.8.c/no information Slender silver-biddy-27.9.a/no information Spearfish remora-27.8.c/no information Spotless smooth-hound-27.8.c/no information
ESP-NAO-FPO-VL1218-IC-NO-	TPD-34.1.2/no information Spanish hogfish-34.1.2/no information Sixbar grouper-34.1.2/no information Shoulderblade coral-34.1.2/no information Rough scad-34.1.2/no information PVD-34.1.2/no information Porgies-34.1.2/no information Oarfishes nei-34.1.2/no information Monopenchelys acuta-34.1.2/no information MMD-34.1.2/no information DGC-34.1.2/no information Barbeled plunderfishes nei-34.1.2/no information Tubenose poacher-34.1.2/no information UCO-34.1.2/no information
ESP-NAO-FPO-VL1218-NGI-NO-	Unicornfish-27.9.a/no information Otophidium chickcharney-27.9.a/no information PVC-27.8.c/no information Raja macrocauda-27.8.c/no information Rock grouper-27.8.c/no information Rosefishes nei-27.9.a/no information Southern barracudina-27.8.c/no information Spotless smooth-hound-27.9.a/no information Windowpane flounder-27.9.a/no information Black seabass-27.8.c/no information Brazilian groupers nei-27.9.a/no information Buffalo sculpin-27.9.a/no information Callinectes swimcrabs nei-27.9.a/no information Cape lobster-27.9.a/no information Coccorella atlantica-27.8.c/no information Common snook-27.9.a/no information Deep-water mud lobster-27.9.a/no information Gavialiceps taeniola-27.9.a/no information Gay's little venus-27.9.a/no information Greeneyes-27.8.c/no information Indo-Pacific king mackerel-27.9.a/no information January octopus-27.9.a/no information Lake(=Common) whitefish-27.9.a/no information Largeeye breams-27.8.c/no information Leister-27.8.c/no information MID-27.8.c/no information MIO-27.8.c/no information Northern brown shrimp-27.9.a/no information
ESP-NAO-HOK-VL0010-IC-NO-	Skipjack tuna-34.1.2/no information bft-ea/no information alb-na/no information
ESP-NAO-HOK-VL0010-NGI-NO-	Common octopus-27.8.c/no information European conger-27.8.c/no information Barnacle-27.8.c/no information Velvet swimcrab-27.8.c/no information Spinous spider crab-27.8.c/no information
ESP-NAO-HOK-VL1012-IC-NO-	Bocaccio rockfish-34.1.2/no information Spanish hogfish-34.1.2/no information Southeast Atlantic soles nei-34.1.2/no information Slender bullseye-34.1.2/no information RYS-34.1.2/no information RFA-34.1.2/no information Red grouper-34.1.2/no information Red crab-34.1.2/no information RAU-34.1.2/no information RAA-34.1.2/no information Porgies-34.1.2/no information Ninebar prawn-goby-34.1.2/no information Needle-tooth moray-34.1.2/no information Madagascar nylon shrimp-34.1.2/no information Long-fingered icefish-34.1.2/no information Long-barbel goatfish-34.1.2/no information Lenok-34.1.2/no information Hucho ishikawae-34.1.2/no information Gurgesiella atlantica-34.1.2/no information Gulf herring-34.1.2/no information GEA-34.1.2/no information FRE-34.1.2/no information Filefishes nei-34.1.2/no information Dotted gizzard shad-34.1.2/no information CKJ-34.1.2/no information Brisaster antarcticus-34.1.2/no information Blue flounder-34.1.2/no information Atlantic seabasses-34.1.2/no information
ESP-NAO-HOK-VL1012-NGI-NO-	Lake(=Common) whitefish-27.8.c/no information Longjaw leatherjacket-27.8.c/no information McCain's skate-27.8.c/no information MQR-27.9.a/no information MYR-27.9.a/no information Porgies-27.9.a/no information Rainbow sardines nei-27.8.c/no information Seabasses nei-27.8.c/no information Sevenstar flying squid-27.8.c/no information Slender grouper-27.8.c/no information Splitfins nei-27.9.a/no information Gulf herring-27.8.c/no information Tusked goby-27.8.c/no information Twobar seabream-27.8.c/no information White barbel-27.8.c/no information Whitefishes

	nei-27.8.c/no information Spotted weakfish-27.8.c/no information Japanese abalone-27.8.c/no information Johnius spp-27.8.c/no information Anchovy sprat-27.9.a/no information Black pomfret-27.8.c/no information Black seabass-27.8.c/no information Blood-stained turbo-27.8.c/no information Brama spp-27.8.c/no information Comb shrimp-27.8.c/no information DEV-27.8.c/no information DKU-27.8.c/no information Doublethread grenadier-27.8.c/no information Doublethread grenadier-27.9.a/no information Dwarf sawfish-27.9.a/no information English sole-27.8.c/no information Finetooth shark-27.8.c/no information Goldlined seabream-27.8.c/no information Goldlined seabream-27.9.a/no information Guinea shrimp-27.8.c/no information Solenocerid shrimps nei-27.8.c/no information Splitfins nei-27.8.c/no information Belanger's croaker-27.9.a/no information Belanger's croaker-27.8.c/no information Atlantic seabob-27.8.c/no information
ESP-NAO-HOK-VL1218-IC-NO-	Butterfishes nei-34.1.2/no information Spanish hogfish-34.1.2/no information ISK-34.1.2/no information
ESP-NAO-HOK-VL1218-MA-NO-	Rock grouper-34.1.1.1/no information Red codling-34.1.1.1/no information Hypodytes rubripinnis-34.1.1.1/no information Butterfishes nei-34.1.1.1/no information Brama spp-34.1.1.1/no information Barbeled catshark-34.1.1.1/no information Silver pomfrets nei-34.1.1.1/no information Needle dogfish-27.9.a/no information
ESP-NAO-HOK-VL1218-NGI-NO-	Carcharhinus sharks nei-27.8.c/no information Seabasses nei-27.9.a/no information Silver croaker-27.8.c/no information Silver gemfish-27.8.c/no information Silver pomfrets nei-27.9.a/no information Silver pomfrets nei-34.1.1.1/no information TIX-27.8.c/no information TNF-27.9.a/no information Trident cuttlefish-27.8.c/no information Twobar seabream-27.8.c/no information Twobar seabream-27.9.a/no information Two-finned round herring-27.8.c/no information VER-27.8.c/no information West African croakers nei-27.8.c/no information Windowpane flounder-27.8.c/no information Windowpane flounder-27.9.a/no information WSW-27.9.a/no information African forktail snapper-27.8.c/no information AGG-27.9.a/no information Atlantic sawtail catshark-27.8.b/no information Atlantic sawtail catshark-27.8.c/no information Australian sawtail catshark-27.9.a/no information Bathyraja diplotaenia-27.8.c/no information Blue mackerel-27.8.c/no information Blueskin seabream-27.9.a/no information Brama spp-27.8.b/no information Brama spp-27.8.c/no information Brama spp-34.1.3.2/no information Brazilian flathead-27.8.c/no information Butterfishes nei-34.1.1.1/no information Cape lobster-27.9.a/no information Carcharhinus sharks nei-27.8.b/no information Carcharhinus sharks nei-27.9.a/no information Caribbean spiny lobster-27.8.c/no information Comb shrimp-27.8.c/no information DKU-27.8.c/no information Dogfishes nei-27.8.c/no information EGM-27.8.c/no information Falkland sprat-27.8.c/no information Flat needlefish-27.8.c/no information Gabon gurnard-27.9.a/no information Geelbek croaker-27.8.c/no information Giant boarfish-27.8.c/no information Giant keyhole sand dollar-27.8.c/no information Goatfishes-27.9.a/no information Guitarfishes nei-27.8.c/no information ICI-27.8.c/no information Intermediate scabbardfish-27.8.c/no information January octopus-27.8.c/no information Jumbo flying squid-27.8.c/no information KZS-27.8.c/no information Lake(=Common) whitefish-27.8.c/no information Lake(=Common) whitefish-27.9.a/no information Largescale flounder-27.8.c/no information Lavender jobfish-27.8.c/no information Longfin squid-27.8.c/no information McCain's skate-27.9.a/no information Mojarras(=Silver-biddies) nei-27.8.c/no information Murray's skate-27.8.c/no information Needle cuttlefish-27.8.c/no information OQU-27.8.c/no information Other-27.8.b/no information Pacific pompano-27.8.b/no information Pacific pompano-27.8.c/no information Panama ghost catshark-27.8.c/no information Peruvian rock seabass-27.8.c/no information Red codling-27.8.c/no information Red codling-27.9.a/no information Red codling-34.1.1.1/no information Red codling-sa 3/no information Red crab-27.8.c/no information Rock grouper-34.1.1.1/no information Scaled sardines-27.8.b/no information Seabasses nei-27.8.c/no information
ESP-NAO-HOK-VL1824-IC-NO-	Spanish hogfish-34.1.2/no information bet-atl/assessed Splendid alfonsino-34.1.2/no information Skipjack tuna-34.1.2/no information alb-na/no information Splendid alfonsino-34.1.1.2/no information
ESP-NAO-HOK-VL1824-MA-NO-	PAP-34.1.3.1/no information Meagre-34.1.3.1/no information Canary dentex-34.1.3.1/no information gbr_mor/assessed Canary dentex-34.1.1.2/no information Pink dentex-34.1.1.2/no information Pink dentex-34.1.3.1/no information
ESP-NAO-HOK-VL1824-NGI-NO-	Seabasses nei-27.8.c/no information Intermediate scabbardfish-27.8.c/no information Dogfishes nei-27.8.c/no information Sheepshead-27.9.a/no information SIE-27.8.c/no information Twobar seabream-27.8.c/no information Brama spp-27.8.c/no information Sheepshead-27.8.c/no information Seabasses nei-27.9.a/no information DKT-27.8.c/no information Black grouper-27.8.c/no information Atlantic sawtail catshark-27.8.c/no information Atlantic butterfish-27.8.c/no information African forktail snapper-27.9.a/no information African forktail snapper-27.8.c/no information
ESP-NAO-HOK-VL2440-IC-NO-	bet-atl/assessed Skipjack tuna-34.1.2/no information
ESP-NAO-HOK-VL2440-NGI-NO-	Limanda punctatissima-27.8.c/no information Atlantic sawtail catshark-27.8.c/no information Australian bonito-27.8.c/no information Benthophilus baeri-27.8.c/no information Goatfishes-27.8.c/no information Seabasses nei-27.8.c/no information
ESP-NAO-PGP-VL1824-NGI-	Black pomfret-27.8.b/no information

NO-	
ESP-NAO-PGP-VL2440-NGI-NO-	Seabasses nei-27.8.b/no information DKU-27.8.a/no information
ESP-NAO-PMP-VL0010-IC-NO-	Parrotfish-34.1.2/no information Skipjack tuna-34.1.2/no information Pink dentex-34.1.2/no information Red porgy-34.1.2/no information bft-ea/no information Splendid alfonsino-34.1.2/no information White trevally-34.1.2/no information Narwal shrimp-34.1.2/no information alb-na/no information vma-34/assessed Grey triggerfish-34.1.2/no information Dusky grouper-34.1.2/no information yft-atl/assessed Wahoo-34.1.2/no information European pilchard(=Sardine)-34.1.2/no information bet-atl/assessed Striped soldier shrimp-34.1.2/no information Common octopus-34.1.2/no information European hake-34.1.2/no information Planehead filefish-34.1.2/no information Comber-34.1.2/no information
ESP-NAO-PMP-VL0010-NGI-NO-	Common octopus-27.9.a/no information EQK-27.9.a/no information Stony sea urchin-27.9.a/no information Barnacle-27.8.c/no information Common octopus-27.8.c/no information Common cuttlefish-27.9.a/no information Barnacle-27.9.a/no information bss.27.8c9a/no information Common prawn-27.9.a/no information Pullet carpet shell-27.9.a/no information Spinous spider crab-27.9.a/no information Velvet swimcrab-27.9.a/no information mac.27.nea/assessed Meagre-27.9.a/no information Banded carpet shell-27.9.a/no information hke.27.8c9a/assessed European conger-27.8.c/no information Queen scallop-27.9.a/no information European conger-27.9.a/no information White seabream-27.9.a/no information Japanese carpet shell-27.9.a/no information
ESP-NAO-PMP-VL1012-IC-NO-	USA-34.1.2/no information Barred grunt-34.1.2/no information TVD-34.1.2/no information Pink dentex-34.1.2/no information alb-na/no information Common pandora-34.1.2/no information European squid-34.1.2/no information Red porgy-34.1.2/no information
ESP-NAO-PMP-VL1012-NGI-NO-	Round scad-27.9.a/no information Barbelthroat carpetshark-27.9.a/no information Belanger's croaker-27.8.c/no information Bull shark-27.9.a/no information Comb shrimp-27.8.c/no information Dogfishes nei-27.8.c/no information Gobitrichinotus radiocularis-27.9.a/no information Guinea shrimp-27.8.c/no information Hooded oyster-27.9.a/no information IBB-27.9.a/no information Largeeye breams-27.8.c/no information Longfin squid-27.9.a/no information Mosaic gulper shark-27.8.c/no information NSC-27.9.a/no information Pacific burrfish-27.8.c/no information Pacific rock crab-27.9.a/no information Pacific sleeper shark-27.9.a/no information Plicate conch-27.9.a/no information Rough scad-27.9.a/no information Sevenstar flying squid-27.9.a/no information
ESP-NAO-PMP-VL1218-NGI-NO-	Lantern fish-27.8.c/no information TCC-27.9.a/no information Spotless smooth-hound-27.8.c/no information Sevenstar flying squid-27.9.a/no information Seabasses nei-27.8.c/no information SCG-27.9.a/no information Santer seabream-27.8.c/no information Red codling-27.8.c/no information Peruvian rock seabass-27.8.c/no information Mangrove hermit crab-27.8.c/no information January octopus-27.8.c/no information Indo-Pacific king mackerel-27.9.a/no information Greeneyes-27.8.c/no information Glassy flying squid-27.8.c/no information EGM-27.8.c/no information Comb shrimp-27.9.a/no information Charonia spp-27.8.c/no information Brushtooth lizardfish-27.8.c/no information Brama spp-27.9.a/no information Blood cockle-27.8.c/no information Belanger's croaker-27.9.a/no information Atlantic menhaden-27.9.a/no information
ESP-NAO-PMP-VL1824-NGI-NO-	Warsaw grouper-27.8.c/no information Coral catshark-27.8.c/no information Gay's little venus-27.8.c/no information Hadropogonichthys lindbergi-27.8.c/no information hke.27.8c9a/assessed
ESP-NAO-PS-VL0010-NGI-NO-	bss.27.8c9a/no information White seabream-27.9.a/no information
ESP-NAO-PS-VL1012-IC-NO-	FRE-34.1.2/no information Chinamanfish-34.1.2/no information European pilchard(=Sardine)-34.1.2/no information Skipjack tuna-34.1.2/no information
ESP-NAO-PS-VL1012-NGI-NO-	Blood-stained turbo-27.9.a/no information Blood-stained turbo-27.8.c/no information Barred grunt-27.9.a/no information Allardice's moray-27.9.a/no information Smooth mactra-27.9.a/no information hom.27.9a/assessed
ESP-NAO-PS-VL1218-IC-NO-	TAX-34.1.2/no information Striped eel catfish-34.1.2/no information Ponyfishes(=Slipmouths) nei-34.1.2/no information Gurgesiella atlantica-34.1.2/no information Luminous cardinalfish-34.1.2/no information Northern brown shrimp-34.1.2/no information UMA-34.1.2/no information Holothuria pervicax-34.1.2/no information
ESP-NAO-PS-VL1218-NGI-NO-	XOX-27.9.a/no information White croaker-27.9.a/no information UMA-27.9.a/no information Twobar seabream-27.9.a/no information Twobar seabream-27.8.c/no information TNF-27.9.a/no information Snooks(=Robalos) nei-27.9.a/no information Silver croaker-27.9.a/no information Sevenstar flying squid-27.9.a/no information Seabasses nei-27.8.c/no information Seabasses nei-27.9.a/no information Sawfishes-27.9.a/no information Sand smelts nei-27.9.a/no information Reticulate round ray-27.8.c/no information Pacific harvestfish-27.9.a/no information Other-27.9.a/no information Mountain mullet-27.9.a/no information Largescale fat snook-27.9.a/no information KZW-27.9.a/no information King soldier bream-27.8.c/no information King crab-27.9.a/no information JNX-27.9.a/no information Golden trevally-27.9.a/no information Giant catfish-27.9.a/no information Commerson's

	dolphin-27.9.a/no information Boeseman croaker-27.8.c/no information Bigscale anchovy-27.9.a/no information Blood-stained turbo-27.9.a/no information Yellowtip halfbeak-27.9.a/no information Alaska plaice-27.8.c/no information Atlantic menhaden-27.9.a/no information Australian bonito-27.9.a/no information Barathronus maculatus-27.9.a/no information Barred grunt-27.9.a/no information Bifid clingfish-27.9.a/no information
ESP-NAO-PS-VL1824-NGI-NO-	Seabasses nei-27.8.c/no information NXC-27.9.a/no information NYS-27.8.c/no information OBA-27.9.a/no information Reticulate round ray-27.9.a/no information Sciaenas nei-27.8.b/no information Seabasses nei-27.8.b/no information Seabasses nei-27.9.a/no information Silver croaker-27.9.a/no information Silver seabream-27.9.a/no information TNF-27.9.a/no information Twobar seabream-27.8.c/no information Twobar seabream-27.9.a/no information White croaker-27.9.a/no information Windowpane flounder-27.8.c/no information Anchovies, etc. nei-27.9.a/no information Australian bonito-27.9.a/no information Blue mackerel-27.9.a/no information Boeseman croaker-27.9.a/no information Brama spp-27.8.c/no information King soldier bream-27.8.c/no information King soldier bream-27.9.a/no information Malabar grouper-27.9.a/no information
ESP-NAO-PS-VL2440-NGI-NO-	Twobar seabream-27.8.c/no information Mountain mullet-27.8.b/no information Mountain mullet-27.8.c/no information NYS-27.8.c/no information Round scad-27.8.b/no information Seabasses nei-27.8.b/no information Seabasses nei-27.8.c/no information Shortjaw leatherjacket-27.8.c/no information Silver seabream-27.8.c/no information Twobar seabream-27.8.b/no information Longfin mojarra-27.8.b/no information West coast seabream-27.8.c/no information African forktail snapper-27.8.c/no information Bay anchovy-27.8.b/no information Burmeister's porpoise-27.8.c/no information Chars nei-27.8.c/no information GDJ-27.8.c/no information Karanteen seabream-27.8.c/no information
EST-NAO-PG-VL0010-NGI--	European perch-27.3.d.28/no information European perch-27.3.d.29/no information Pike-perch-27.3.d.28/no information European smelt-27.3.d.28/no information
EST-NAO-PG-VL1012-NGI--	Atlantic herring-27.3.d.28/no information
EST-NAO-TM-VL1218-NGI--	spr.27.22-32/assessed her.27.25-2932/assessed
EST-NAO-TM-VL1824-NGI--	spr.27.22-32/assessed her.27.25-2932/assessed
EST-NAO-TM-VL2440-NGI--	spr.27.22-32/assessed her.27.25-2932/assessed Atlantic herring-27.3.d.28/no information
FIN-NAO-PG-VL0010-NGI--	sal.27.22-31/no information Whitefishes nei-27.3.d.31/no information European perch-27.3.d.30/no information Pike-perch-27.3.d.30/no information Whitefishes nei-27.3.d.30/no information her.27.3031/assessed Pike-perch-27.3.d.29/no information European perch-27.3.d.29/no information Pike-perch-27.3.d.32/no information European smelt-27.3.d.30/no information Atlantic salmon-27.3.d.32/no information Vendace-27.3.d.31/no information
FIN-NAO-PG-VL1012-NGI--	European smelt-27.3.d.30/no information her.27.3031/assessed her.27.25-2932/assessed Atlantic cod-27.3.d.29/no information European perch-27.3.d.30/no information
FIN-NAO-TM-VL1218-NGI--	her.27.25-2932/assessed her.27.3031/assessed
FIN-NAO-TM-VL1824-NGI--	her.27.25-2932/assessed her.27.3031/assessed
FIN-NAO-TM-VL2440-NGI--	her.27.3031/assessed her.27.25-2932/assessed
FRA-NAO-DFN-VL1012-NGI--	sol.27.8ab/assessed sol.27.7d/assessed sol.27.4/assessed Spinous spider crab-27.7.e/no information mon.27.78abd/assessed bss.27.8ab/assessed pol.27.89a/no information ank.27.78abd/assessed Gilthead seabream-27.8.a/no information Great Atlantic scallop-27.7.e/no information hke.27.3a46-8abd/assessed Meagre-27.8.b/no information Common cuttlefish-27.7.d/no information European lobster-27.7.d/no information bss.27.4bc7ad-h/assessed bll.27.3a47de/no information Edible crab-27.7.e/no information Black seabream-27.8.a/no information Turbot-27.7.d/no information
FRA-NAO-DFN-VL1824-NGI--	hke.27.3a46-8abd/assessed sol.27.8ab/assessed European hake-27.7.j/no information mon.27.78abd/assessed
FRA-NAO-DFN-VL2440-NGI--	hke.27.3a46-8abd/assessed European hake-27.7.j/no information
FRA-NAO-DTS-VL1824-NGI--	mon.27.78abd/assessed Inshore squids nei-27.7.d/no information ank.27.78abd/assessed Monkfishes nei-27.7.j/no information alb-na/no information meg.27.7b-k8abd/assessed had.27.7b-k/assessed mac.27.nea/assessed whg.27.7b-ce-k/assessed hke.27.3a46-8abd/assessed nep.fu.2324/assessed Inshore squids nei-27.4.c/no information Common cuttlefish-27.8.a/no information whg.27.47d/assessed bss.27.8ab/assessed John dory-27.8.a/no information Common cuttlefish-27.7.d/no information sol.27.8ab/assessed Inshore squids nei-27.8.a/no information John dory-27.7.e/no information Common cuttlefish-27.7.e/no information Inshore squids nei-27.7.e/no information Black seabream-27.7.e/no information sdv.27.nea/no information Cuckoo ray-27.7.h/no information cod.27.7e-k/assessed John dory-27.7.f/no information rjc.27.3a47d/no information mur.27.3a47d/no information Surmullet-27.8.a/no information Cuckoo ray-27.8.a/no information
FRA-NAO-DTS-VL2440-NGI--	Monkfishes nei-27.7.j/no information mon.27.78abd/assessed Monkfishes nei-27.7.c/no information

	Megrims nei-27.7.j/no information had.27.7b-k/assessed John dory-27.7.e/no information ank.27.78abd/assessed mac.27.nea/assessed hke.27.3a46-8abd/assessed anf.27.3a46/no information Inshore squids nei-27.7.d/no information whg.27.7b-ce-k/assessed John dory-27.7.h/no information meg.27.7b-k8abd/assessed Inshore squids nei-27.7.e/no information European hake-27.7.j/no information mur.27.3a47d/no information alb-na/no information Megrims nei-27.7.c/no information Common cuttlefish-27.7.e/no information Common cuttlefish-27.7.h/no information gur.27.3-8/no information Lemon sole-27.7.h/no information
FRA-NAO-DTS-VL40XX-NGI--	pok.27.3a46/assessed cod.27.1-2/assessed Atlantic cod-27.2.b/no information bsf.27.nea/no information hke.27.3a46-8abd/assessed anf.27.3a46/no information
FRA-NAO-FPO-VL1012-NGI--	Whelk-27.7.e/no information Whelk-27.7.d/no information European lobster-27.7.e/no information Spinous spider crab-27.7.e/no information European lobster-27.7.d/no information Great Atlantic scallop-27.7.e/no information
FRA-NAO-HOK-VL1012-NGI--	bss.27.8ab/assessed hke.27.3a46-8abd/assessed whg.27.89a/no information Meagre-27.8.b/no information pol.27.89a/no information European conger-27.8.a/no information
FRA-NAO-HOK-VL1218-NGI--	whg.27.89a/no information pol.27.89a/no information Pouting(=Bib)-27.8.a/no information
FRA-NAO-HOK-VL1824-NGI--	hke.27.3a46-8abd/assessed European conger-27.8.a/no information European hake-27.8.d/no information
FRA-NAO-HOK-VL2440-NGI--	hke.27.3a46-8abd/assessed European hake-27.7.j/no information
FRA-NAO-MGP-VL1012-NGI--	Great Atlantic scallop-27.7.d/no information ple.27.7d/assessed pil.27.8abd/assessed sol.27.7d/assessed Tangle-27.7.e/no information Great Atlantic scallop-27.7.e/no information Marine fishes nei-27.7.e/no information
FRA-NAO-MGP-VL2440-NGI--	Inshore squids nei-27.7.d/no information alb-na/no information Inshore squids nei-27.4.c/no information mac.27.nea/assessed whg.27.47d/assessed mur.27.3a47d/no information hke.27.3a46-8abd/assessed bss.27.8ab/assessed Common cuttlefish-27.7.d/no information Inshore squids nei-27.8.a/no information Surmullet-27.8.b/no information
FRA-NAO-PGO-VL1012-NGI--	alb-na/no information
FRA-NAO-PGP-VL2440-NGI--	European hake-27.7.j/no information European hake-27.7.k/no information
FRA-NAO-PS-VL1012-NGI--	Meagre-27.8.b/no information Gilthead seabream-27.8.b/no information pil.27.8abd/assessed White seabream-27.8.b/no information Mediterranean horse mackerel-27.8.b/no information Atlantic bonito-27.8.b/no information
FRA-NAO-PS-VL1218-NGI--	pil.27.8abd/assessed European pilchard(=Sardine)-27.7.e/no information ane.27.8/no information
FRA-NAO-PS-VL1824-NGI--	pil.27.8abd/assessed hom.27.2a4a5b6a7a-ce-k8/assessed bft-ea/no information European pilchard(=Sardine)-27.7.e/no information
FRA-NAO-TM-VL0010-NGI--	pil.27.8abd/assessed
FRA-NAO-TM-VL1012-NGI--	pil.27.8abd/assessed Black seabream-27.8.a/no information Meagre-27.8.a/no information Gilthead seabream-27.8.a/no information
FRA-NAO-TM-VL1218-NGI--	alb-na/no information pil.27.8abd/assessed hke.27.3a46-8abd/assessed bss.27.8ab/assessed Mediterranean horse mackerel-27.8.a/no information bft-ea/no information Inshore squids nei-27.8.a/no information
FRA-NAO-TM-VL1824-NGI--	alb-na/no information hke.27.3a46-8abd/assessed pil.27.8abd/assessed bss.27.8ab/assessed bft-ea/no information Common cuttlefish-27.8.a/no information mon.27.78abd/assessed mac.27.nea/assessed
FRA-NAO-TM-VL2440-NGI--	alb-na/no information mac.27.nea/assessed mon.27.78abd/assessed hke.27.3a46-8abd/assessed John dory-27.7.h/no information meg.27.7b-k8abd/assessed ank.27.78abd/assessed Common cuttlefish-27.7.h/no information Cuckoo ray-27.7.h/no information
GBR-NAO-DFN-VL1218-NGI--	hke.27.3a46-8abd/assessed pol.27.67/no information European hake-27.7.j/no information Turbot-27.7.h/no information Turbot-27.7.e/no information
GBR-NAO-DFN-VL1824-NGI--	hke.27.3a46-8abd/assessed European hake-27.7.j/no information pol.27.67/no information mon.27.78abd/assessed
GBR-NAO-DFN-VL2440-NGI--	anf.27.3a46/no information Anglerfishes nei-27.6.b/no information Anglerfishes nei-27.7.k/no information Anglerfishes nei-27.7.c/no information
GBR-NAO-DTS-VL1824-NGI--	anf.27.3a46/no information cod.27.47d20/assessed nep.fu.7/assessed had.27.46a20/assessed nep.fu.15/assessed whg.27.47d/assessed lez.27.4a6a/assessed Common squids nei-27.4.a/no information nep.fu.9/assessed nep.fu.13/assessed pok.27.3a46/assessed Norway lobster-27.7.k/no

	information lin.27.3a4a6-91214/no information had.27.7a/assessed hke.27.3a46-8abd/assessed
GBR-NAO-DTS-VL2440-NGI--	cod.27.47d20/assessed had.27.46a20/assessed anf.27.3a46/no information hke.27.3a46-8abd/assessed whg.27.47d/assessed pok.27.3a46/assessed ple.27.420/assessed Anglerfishes nei-27.7.j/no information lin.27.3a4a6-91214/no information had.27.6b/assessed
GBR-NAO-DTS-VL40XX-NGI--	Atlantic cod-27.2.a/no information Atlantic cod-27.1/no information ple.27.420/assessed Atlantic cod-27.2.b/no information pok.27.3a46/assessed Atlantic cod-27.14.b/no information cod.27.47d20/assessed
GBR-NAO-HOK-VL2440-NGI--	hke.27.3a46-8abd/assessed lin.27.3a4a6-91214/no information
GBR-NAO-PS-VL1218-NGI--	European pilchard(=Sardine)-27.7.e/no information European pilchard(=Sardine)-27.7.f/no information
GBR-NAO-TBB-VL40XX-NGI--	ple.27.420/assessed sol.27.4/assessed
GBR-NAO-TM-VL40XX-NGI--	mac.27.nea/assessed her.27.1-24a514a/assessed
IRL-NAO-DFN-VL1012-NGI--	hke.27.3a46-8abd/assessed Turbot-27.7.g/no information pol.27.67/no information Saithe(=Pollock)-27.7.g/no information Whelk-27.7.a/no information Palaemonid shrimps nei-27.7.g/no information Other-27.7.g/no information
IRL-NAO-DFN-VL1218-NGI--	European hake-27.7.j/no information hke.27.3a46-8abd/assessed Saithe(=Pollock)-27.7.g/no information Pollack-27.7.j/no information pol.27.67/no information Turbot-27.7.g/no information Turbot-27.7.j/no information Palinurid spiny lobsters nei-27.7.j/no information Other-27.7.g/no information
IRL-NAO-DFN-VL1824-NGI--	European hake-27.7.j/no information hke.27.3a46-8abd/assessed Turbot-27.7.j/no information Anglerfishes nei-27.7.j/no information Pollack-27.7.j/no information Megrims nei-27.7.j/no information
IRL-NAO-DFN-VL2440-NGI--	European hake-27.7.j/no information Saithe(=Pollock)-27.7.j/no information Pollack-27.7.j/no information
IRL-NAO-DTS-VL0010-NGI--	Edible crab-27.7.b/no information Whelk-27.7.b/no information European lobster-27.7.b/no information Palaemonid shrimps nei-27.7.b/no information Whelk-27.7.a/no information nep.fu.16/assessed hke.27.3a46-8abd/assessed Edible crab-27.7.a/no information Great Atlantic scallop-27.7.a/no information
IRL-NAO-DTS-VL1012-NGI--	Norway lobster-27.7.j/no information European sprat-27.7.a/no information nep.fu.15/assessed Megrims nei-27.7.j/no information Anglerfishes nei-27.7.j/no information pol.27.67/no information nep.fu.22/assessed Palaemonid shrimps nei-27.7.g/no information her.27.irls/assessed nep.fu.2021/assessed Common shrimp-27.7.a/no information
IRL-NAO-FPO-VL1012-NGI--	Whelk-27.7.a/no information Edible crab-27.6.a/no information Edible crab-27.7.g/no information Edible crab-27.7.j/no information Edible crab-27.7.a/no information
IRL-NAO-FPO-VL1218-NGI--	Edible crab-27.6.a/no information Whelk-27.7.a/no information Edible crab-27.7.j/no information
IRL-NAO-HOK-VL1012-NGI--	mac.27.nea/assessed European lobster-27.7.b/no information
IRL-NAO-TBB-VL2440-NGI--	meg.27.7b-k8abd/assessed mon.27.78abd/assessed Turbot-27.7.g/no information ank.27.78abd/assessed Lemon sole-27.7.g/no information Witch flounder-27.7.g/no information had.27.7b-k/assessed hke.27.3a46-8abd/assessed
IRL-NAO-TM-VL1824-NGI--	alb-na/no information mac.27.nea/assessed whb.27.1-91214/assessed Atlantic mackerel-27.7.j/no information
IRL-NAO-TM-VL2440-NGI--	mac.27.nea/assessed whb.27.1-91214/assessed alb-na/no information hom.27.2a4a5b6a7a-ce-k8/assessed
IRL-NAO-TM-VL40XX-NGI--	mac.27.nea/assessed hom.27.2a4a5b6a7a-ce-k8/assessed
LTU-NAO-DFN-VL1012-NGI--	Atlantic cod-27.3.d.26/no information European smelt-27.3.d.26/no information
LTU-NAO-DTS-VL1824-NGI--	Atlantic cod-27.3.d.26/no information spr.27.22-32/assessed her.27.25-2932/assessed
LTU-NAO-DTS-VL2440-NGI--	Atlantic cod-27.3.d.26/no information spr.27.22-32/assessed
LTU-NAO-PG-VL0010-NGI--	European smelt-27.3.d.26/no information Gobies nei-27.3.d.26/no information Turbot-27.3.d.26/no information
LTU-NAO-TM-VL1824-NGI--	spr.27.22-32/assessed her.27.25-2932/assessed
LTU-NAO-TM-VL2440-NGI--	spr.27.22-32/assessed her.27.25-2932/assessed

LTU-NAO-TM-VL40XX-NGI--	spr.27.22-32/assessed her.27.25-2932/assessed
LVA-NAO-TM-VL2440-NGI--	spr.27.22-32/assessed her.27.25-2932/assessed her.27.28/assessed
NLD-NAO-DFN-VL1824-NGI--	Edible crab-27.4.c/no information sol.27.4/assessed Common shrimp-27.4.c/no information
NLD-NAO-DTS-VL2440-NGI--	ple.27.420/assessed European squid-27.7.d/no information mur.27.3a47d/no information mac.27.nea/assessed Sevenstar flying squid-27.7.d/no information tur.27.4/assessed Tub gurnard-27.7.d/no information Surmullet-27.7.e/no information cod.27.47d20/assessed Tub gurnard-27.4.b/no information nep.fu.8/assessed
NLD-NAO-PG-VL1012-NGI--	sol.27.4/assessed bss.27.4bc7ad-h/assessed
NLD-NAO-TBB-VL1824-NGI--	gag.27.nea/no information Common shrimp-27.4.c/no information
NLD-NAO-TBB-VL2440-NGI--	Pouting(=Bib)-27.4.b/no information sol.27.4/assessed ple.27.420/assessed Common shrimp-27.4.b/no information
NLD-NAO-TBB-VL40XX-NGI--	sol.27.4/assessed ple.27.420/assessed
POL-NAO-DFN-VL1218-NGI--	Atlantic cod-27.3.d.25/no information trs.27.22-32/no information sal.27.22-31/no information
POL-NAO-DTS-VL1218-NGI--	fle.27.2425/no information Atlantic cod-27.3.d.25/no information cod.27.22-24/assessed Atlantic cod-27.3.d.26/no information trs.27.22-32/no information
POL-NAO-DTS-VL1824-NGI--	fle.27.2425/no information Atlantic cod-27.3.d.25/no information Atlantic cod-27.3.d.26/no information spr.27.22-32/assessed
POL-NAO-PG-VL0010-NGI--	European perch-27.3.d.24/no information Pike-perch-27.3.d.26/no information Atlantic cod-27.3.d.25/no information European eel-27.3.d.26/no information European eel-27.3.d.24/no information trs.27.22-32/no information her.27.25-2932/assessed Freshwater bream-27.3.d.24/no information fle.27.2425/no information Freshwater bream-27.3.d.26/no information
POL-NAO-PG-VL1012-NGI--	Atlantic cod-27.3.d.25/no information fle.27.2425/no information trs.27.22-32/no information ple.27.24-32/no information
POL-NAO-TM-VL1824-NGI--	spr.27.22-32/assessed her.27.25-2932/assessed
POL-NAO-TM-VL2440-NGI--	spr.27.22-32/assessed her.27.25-2932/assessed
PRT-NAO-DFN-VL0010-NGI--	bss.27.8c9a/no information Gilthead seabream-27.9.a/no information Sea lamprey-27.9.a/no information European eel-27.9.a/no information Surmullet-27.9.a/no information White seabream-27.9.a/no information Common cuttlefish-27.9.a/no information Allis shad-27.9.a/no information Red porgy-27.9.a/no information Axillary seabream-27.9.a/no information Common pandora-27.9.a/no information Thinlip grey mullet-27.9.a/no information
PRT-NAO-DFN-VL0010-P3--	Parrotfish-27.10.a/no information Veined squid-27.10.a/no information Yellowmouth barracuda-27.10.a/no information Blackspot(=red) seabream-27.10.a/no information Thicklip grey mullet-27.10.a/no information Grey triggerfish-27.10.a/no information White seabream-27.10.a/no information White trevally-27.10.a/no information
PRT-NAO-DFN-VL1012-NGI--	Common octopus-27.9.a/no information John dory-27.9.a/no information sol.27.8c9a/no information Surmullet-27.9.a/no information Thickback soles nei-27.9.a/no information Common cuttlefish-27.9.a/no information hke.27.8c9a/assessed Turbot-27.9.a/no information Axillary seabream-27.9.a/no information ank.27.8c9a/assessed Pouting(=Bib)-27.9.a/no information Red porgy-27.9.a/no information rjc.27.9a/no information Forkbeard-27.9.a/no information
PRT-NAO-DFN-VL1218-NGI--	Common octopus-27.9.a/no information John dory-27.9.a/no information ank.27.8c9a/assessed sol.27.8c9a/no information hke.27.8c9a/assessed Pouting(=Bib)-27.9.a/no information Common cuttlefish-27.9.a/no information bss.27.8c9a/no information rjc.27.9a/no information Turbot-27.9.a/no information rjh.27.9a/no information Surmullet-27.9.a/no information Thickback sole-27.9.a/no information Thickback soles nei-27.9.a/no information Red porgy-27.9.a/no information Common spiny lobster-27.9.a/no information
PRT-NAO-DFN-VL1824-NGI--	hke.27.8c9a/assessed John dory-27.9.a/no information Common octopus-27.9.a/no information sol.27.8c9a/no information ank.27.8c9a/assessed hom.27.9a/assessed rjc.27.9a/no information Common cuttlefish-27.9.a/no information bss.27.8c9a/no information
PRT-NAO-DRB-VL1218-NGI--	Solid surf clam-27.9.a/no information
PRT-NAO-DTS-VL1012-NGI--	sol.27.8c9a/no information Thickback soles nei-27.9.a/no information Deep-water rose shrimp-27.9.a/no information Lefteye flounders nei-27.9.a/no information Axillary seabream-27.9.a/no information Common octopus-27.9.a/no information hke.27.8c9a/assessed John dory-27.9.a/no information European squid-27.9.a/no information nep.fu.2829/assessed rjc.27.9a/no information ank.27.8c9a/assessed

PRT-NAO-FPO-VL0010-NGI--	Common octopus-27.9.a/no information
PRT-NAO-FPO-VL1012-NGI--	Common octopus-27.9.a/no information
PRT-NAO-HOK-VL0010-P2--	Black scabbardfish-34.1.2/no information Skipjack tuna-34.1.2/no information Pink dentex-34.1.2/no information bet-atl/assessed
PRT-NAO-HOK-VL0010-P3--	Blackspot(=red) seabream-27.10.a/no information Veined squid-27.10.a/no information Red porgy-27.10.a/no information Wreckfish-27.10.a/no information Skipjack tuna-27.10.a/no information Blackbelly rosefish-27.10.a/no information Alfonsino-27.10.a/no information Forkbeard-27.10.a/no information Red scorpionfish-27.10.a/no information
PRT-NAO-HOK-VL1012-NGI--	bss.27.8c9a/no information Wreckfish-27.9.a/no information European conger-27.9.a/no information Blackbelly rosefish-27.9.a/no information Red porgy-27.9.a/no information rjc.27.9a/no information sbr.27.9/no information
PRT-NAO-HOK-VL1012-P3--	Veined squid-27.10.a/no information Blackspot(=red) seabream-27.10.a/no information Blackbelly rosefish-27.10.a/no information Alfonsino-27.10.a/no information Skipjack tuna-27.10.a/no information Wreckfish-27.10.a/no information Splendid alfonsino-27.10.a/no information Common mora-27.10.a/no information
PRT-NAO-HOK-VL1218-NGI--	bsf.27.nea/no information Blue shark-27.9.a/no information Wreckfish-27.9.a/no information sbr.27.9/no information Red porgy-27.9.a/no information
PRT-NAO-HOK-VL1218-P2--	Black scabbardfish-34.1.2/no information
PRT-NAO-HOK-VL1218-P3--	Skipjack tuna-27.10.a/no information Blackspot(=red) seabream-27.10.a/no information bet-atl/assessed Blackbelly rosefish-27.10.a/no information alb-na/no information Veined squid-27.10.a/no information Alfonsino-27.10.a/no information
PRT-NAO-HOK-VL1824-P2--	Black scabbardfish-34.1.2/no information bet-atl/assessed
PRT-NAO-HOK-VL2440-P2--	bet-atl/assessed Skipjack tuna-34.1.2/no information
PRT-NAO-HOK-VL2440-P3--	bet-atl/assessed Skipjack tuna-27.10.a/no information Skipjack tuna-34.1.2/no information
PRT-NAO-PGP-VL0010-NGI--	Common octopus-27.9.a/no information Common edible cockle-27.9.a/no information Common cuttlefish-27.9.a/no information bss.27.8c9a/no information Meagre-27.9.a/no information sol.27.8c9a/no information Gilthead seabream-27.9.a/no information White seabream-27.9.a/no information Surmullet-27.9.a/no information European conger-27.9.a/no information Pullet carpet shell-27.9.a/no information
PRT-NAO-PGP-VL1824-NGI--	Common octopus-27.9.a/no information Pouting(=Bib)-27.9.a/no information hke.27.8c9a/assessed hom.27.9a/assessed
PRT-NAO-PMP-VL0010-NGI--	Common octopus-27.9.a/no information Meagre-27.9.a/no information bss.27.8c9a/no information pil.27.8c9a/assessed Gilthead seabream-27.9.a/no information Common cuttlefish-27.9.a/no information White seabream-27.9.a/no information
PRT-NAO-PS-VL0010-NGI--	ane.27.9a/no information pil.27.8c9a/assessed hom.27.9a/assessed
PRT-NAO-PS-VL0010-P3--	Blue jack mackerel-27.10.a/no information
PRT-NAO-PS-VL1012-NGI--	ane.27.9a/no information pil.27.8c9a/assessed Chub mackerel-27.9.a/no information hom.27.9a/assessed
PRT-NAO-PS-VL1012-P3--	Blue jack mackerel-27.10.a/no information Chub mackerel-27.10.a/no information
PRT-NAO-PS-VL1218-NGI--	pil.27.8c9a/assessed hom.27.9a/assessed Chub mackerel-27.9.a/no information ane.27.9a/no information
PRT-NAO-PS-VL1824-NGI--	pil.27.8c9a/assessed ane.27.9a/no information Chub mackerel-27.9.a/no information
PRT-NAO-PS-VL2440-NGI--	pil.27.8c9a/assessed ane.27.9a/no information Chub mackerel-27.9.a/no information
SWE-NAO-DFN-VL0010-NGI--	cod.27.22-24/assessed her.27.3031/assessed Atlantic cod-27.3.d.25/no information Whitefishes nei-27.3.d.31/no information Atlantic mackerel-27.3.a/no information European eel-27.3.d.27/no information Edible crab-27.3.a/no information European perch-27.3.d.30/no information Lumpfish(=Lumpsucker)-27.3.a/no information Whitefishes nei-27.3.d.30/no information sal.27.22-31/no information cod.27.21/no information Lumpfish(=Lumpsucker)-27.3.b.23/no information Common sole-27.3.a/no information Vendace-27.3.d.31/no information European perch-27.3.d.25/no information European eel-27.3.d.25/no information trs.27.22-32/no information Northern pike-27.3.d.25/no information
SWE-NAO-DFN-VL1012-NGI--	cod.27.22-24/assessed Vendace-27.3.d.31/no information her.27.20-24/assessed her.27.3031/assessed cod.27.21/no information Atlantic mackerel-27.3.a/no information

	pol.27.3a4/no information
SWE-NAO-DFN-VL1218-NGI--	cod.27.22-24/assessed fle.27.2628/no information Turbot-27.3.d.24/no information
SWE-NAO-DTS-VL2440-NGI--	pra.27.3a4a/assessed pok.27.3a46/assessed cod.27.47d20/assessed cod.27.21/no information
SWE-NAO-HOK-VL0010-NGI--	Atlantic mackerel-27.3.a/no information European lobster-27.3.a/no information cod.27.21/no information
SWE-NAO-HOK-VL1012-NGI--	Atlantic cod-27.3.d.25/no information cod.27.22-24/assessed cod.27.21/no information
SWE-NAO-PS-VL1012-NGI--	her.27.25-2932/assessed
SWE-NAO-PS-VL1218-NGI--	her.27.25-2932/assessed
SWE-NAO-TM-VL1012-NGI--	her.27.25-2932/assessed
SWE-NAO-TM-VL1218-NGI--	her.27.3031/assessed
SWE-NAO-TM-VL1824-NGI--	her.27.25-2932/assessed spr.27.22-32/assessed
SWE-NAO-TM-VL2440-NGI--	her.27.3031/assessed her.27.25-2932/assessed her.27.3a47d/assessed spr.27.22-32/assessed
SWE-NAO-TM-VL40XX-NGI--	her.27.25-2932/assessed her.27.3a47d/assessed spr.27.22-32/assessed her.27.1-24a514a/assessed European sprat-27.3.d.28/no information

For Area37

fleet_code	major_stocks
BGR-MBS-DFN-VL0006-NGI--	Bluefish-sa 29/no information Gobies nei-sa 29/no information Atlantic bonito-sa 29/no information hmm-gsa29/assessed Garfish-sa 29/no information
BGR-MBS-DFN-VL0612-NGI--	tur-gsa29/assessed Atlantic bonito-sa 29/no information Bluefish-sa 29/no information Gobies nei-sa 29/no information
BGR-MBS-DFN-VL1218-NGI--	tur-gsa29/assessed rpw-gsa29/assessed
BGR-MBS-FPO-VL0006-NGI--	Common shrimp-sa 29/no information spr-gsa29/assessed
BGR-MBS-FPO-VL0612-NGI--	hmm-gsa29/assessed spr-gsa29/assessed
BGR-MBS-HOK-VL0006-NGI--	dgs-gsa29/assessed Gobies nei-sa 29/no information Bluefish-sa 29/no information
BGR-MBS-HOK-VL0612-NGI--	dgs-gsa29/assessed tur-gsa29/assessed Bluefish-sa 29/no information
BGR-MBS-PGP-VL0006-NGI--	Sand gaper-sa 29/no information
BGR-MBS-PGP-VL0612-NGI--	Sand gaper-sa 29/no information rpw-gsa29/assessed tur-gsa29/assessed
BGR-MBS-PGP-VL1218-NGI--	rpw-gsa29/assessed tur-gsa29/assessed rjc-gsa29/no information
BGR-MBS-PMP-VL0006-NGI--	Sand gaper-sa 29/no information rpw-gsa29/assessed
BGR-MBS-PMP-VL0612-NGI--	Sand gaper-sa 29/no information rpw-gsa29/assessed
BGR-MBS-PMP-VL1218-NGI--	rpw-gsa29/assessed mut-gsa29/assessed
BGR-MBS-PMP-VL1824-NGI--	rpw-gsa29/assessed Bluefish-sa 29/no information spr-gsa29/assessed mut-gsa29/assessed
BGR-MBS-PMP-VL2440-NGI--	rpw-gsa29/assessed spr-gsa29/assessed
BGR-MBS-PS-VL0006-NGI--	Silversides(=Sand smelts) nei-sa 29/no information hmm-gsa29/assessed Leaping mullet-sa 29/no information spr-gsa29/assessed Flathead grey mullet-sa 29/no information Sand gaper-sa 29/no information Gobies nei-sa 29/no information
BGR-MBS-PS-VL0612-NGI--	Pontic shad-sa 29/no information hmm-gsa29/assessed Gobies nei-sa 29/no information mut-gsa29/assessed Flathead grey mullet-sa 29/no information
BGR-MBS-TBB-VL0612-NGI--	rpw-gsa29/assessed
BGR-MBS-TBB-VL1218-NGI--	rpw-gsa29/assessed
BGR-MBS-TBB-VL1824-NGI--	rpw-gsa29/assessed hmm-gsa29/assessed
BGR-MBS-TM-VL0612-NGI--	tur-gsa29/assessed Bluefish-sa 29/no information spr-gsa29/assessed

BGR-MBS-TM-VL1218-NGI--	spr-gsa29/assessed mut-gsa29/assessed Bluefish-sa 29/no information
BGR-MBS-TM-VL1824-NGI--	spr-gsa29/assessed hmm-gsa29/assessed mut-gsa29/assessed
BGR-MBS-TM-VL2440-NGI--	spr-gsa29/assessed Bluefish-sa 29/no information
CYP-MBS-DTS-VL2440-NGI--	Surmullet-sa 14/no information spc-gsa25/no information mut-gsa25/no information Surmullet-sa 15/no information Bogue-sa 25/no information pac-gsa25/assessed Red mullet-sa 24/no information hke-gsa12_13_14_15_16/assessed European squid-sa 25/no information dps-gsa12_13_14_15_16/assessed Axillary seabream-sa 25/no information
CYP-MBS-PGP-VL1218-NGI--	alb-med/no information bft-ea/no information
ESP-MBS-DFN-VL0612-NGI-NO-	Caribbean spiny lobster-sa 5/no information YOD-sa 5/no information Yamato shrimp-sa 6/no information WLF-sa 6/no information Widow rockfish-sa 5/no information Whitson's grenadier-sa 6/no information Whitespotted conger-sa 6/no information White sardine-sa 6/no information Whitehead's round herring-sa 6/no information UOC-sa 6/no information UFA-sa 6/no information TTM-sa 6/no information TTA-sa 6/no information Tropical spiny lobsters nei-sa 6/no information Tristan da Cunha rock lobster-sa 6/no information Ticon cownose ray-sa 1/no information Talang queenfish-sa 6/no information Swamp ghost crab-sa 6/no information Surf clams nei-sa 6/no information SUG-sa 6/no information Streaked seerfish-sa 6/no information Starspotted smooth-hound-sa 6/no information Stalix histrio-sa 6/no information Spotted ratfish-sa 6/no information Spotted estuary smooth-hound-sa 6/no information Spotless smooth-hound-sa 6/no information Spotless smooth-hound-sa 1/no information Spotfin dragonet-sa 6/no information Spinner shark-sa 6/no information Spinefeet(=Rabbitfishes) nei-sa 6/no information Speckled blue grouper-sa 1/no information Spaghetti eel-sa 6/no information Spadenose shark-sa 6/no information Southern spiny lobster-sa 6/no information Southeast Atlantic soles nei-sa 5/no information So-iny (redlip) mullet-sa 6/no information Softshell red crab-sa 6/no information Sockeye(=Red) salmon-sa 6/no information Snubnose pompano-sa 6/no information Smalltooth emperor-sa 6/no information Smalleye catshark-sa 5/no information Slinger seabream-sa 6/no information Slinger seabream-sa 5/no information Slender snipe eel-sa 6/no information Slantlip eel-sa 5/no information Silver seatrout-sa 6/no information Shortfin scad-sa 6/no information Sharptooth smooth-hound-sa 6/no information Shango dragonet-sa 6/no information SGO-sa 6/no information SFH-sa 6/no information Serra Spanish mackerel-sa 6/no information SEP-sa 6/no information Seabasses nei-sa 6/no information Sculpins-sa 6/no information Scats-sa 6/no information Santer seabream-sa 6/no information SAD-sa 6/no information Saddletail grouper-sa 6/no information RRS-sa 6/no information Round scad-sa 6/no information Rough pomfret-sa 6/no information Rough leatherjackets-sa 6/no information Rock violet-sa 6/no information Ribeiroclinus eigenmanni-sa 1/no information Red cusk-eel-sa 6/no information RCC-sa 6/no information Radiate semele-sa 6/no information RAA-sa 6/no information Purple brotula-sa 6/no information Ploughfish-sa 1/no information Plata pompano-sa 6/no information Petrale sole-sa 6/no information Peruvian weakfish-sa 6/no information PDG-sa 1/no information Pacific seabobs-sa 6/no information Pacific sandlance-sa 6/no information Pacific cownose ray-sa 6/no information Pacific cownose ray-sa 1/no information Oval grouper-sa 6/no information Otophidium chickcharney-sa 6/no information Ornate spiny lobster-sa 6/no information ORB-sa 6/no information NSE-sa 5/no information Northern red snapper-sa 6/no information NMY-sa 6/no information New Zealand mussel-sa 6/no information Neptune rose shrimp-sa 6/no information Narrowtail catshark-sa 6/no information Narrow otter shell-sa 6/no information Moray cods nei-sa 6/no information Monopenchelys acuta-sa 6/no information MFU-sa 6/no information MEF-sa 6/no information MDK-sa 6/no information Marbled rockcod-sa 6/no information Mangrove red snapper-sa 5/no information Malabar grouper-sa 6/no information Luminous flying squid-sa 6/no information LSF-sa 6/no information Longhead dab-sa 6/no information Longfin trevally-sa 6/no information Longfin squid-sa 6/no information Lenok-sa 6/no information Leister-sa 6/no information Leaping bonito-sa 6/no information Leaftail croaker-sa 6/no information LCB-sa 6/no information Lavender jobfish-sa 6/no information Lampadena speculigera-sa 6/no information Lambis spp-sa 5/no information Lake(=Common) whitefish-sa 5/no information Kroyer's deep-sea angler fish-sa 6/no information Korean mussel-sa 6/no information Korean mussel-sa 1/no information Khadary-whitefish-sa 6/no information JLM-sa 6/no information JFA-sa 6/no information JEC-sa 6/no information Jeboehlkia gladifer-sa 6/no information Japanese scad-sa 6/no information HUR-sa 6/no information Horse mussels nei-sa 6/no information Hooktooth shark-sa 6/no information Halicmetus reticulatus-sa 1/no information Gulf toadfish-sa 6/no information Green birdmouth wrasse-sa 6/no information Goto's herring-sa 6/no information Goldstripe sardinella-sa 6/no information Goatsbeard brotula-sa 6/no information Giant boarfish-sa 6/no information GFG-sa 6/no information FUT-sa 6/no information Fringebarbel sturgeon-sa 6/no information Freckled driftfish-sa 5/no information Fransmadam-sa 6/no information Finetooth shark-sa 6/no information FIF-sa 6/no information European edible sea urchin-sa 1/no information ESZ-sa 6/no information EGS-sa 6/no information Eelpouts nei-sa 6/no information Easter damselfish-sa 6/no information DRC-sa 5/no information Dosinia clam-sa 6/no information Diadromous fishes nei-sa 6/no information DGC-sa 6/no information Deepwater longtail red snapper-sa 6/no information Deep-sea smelt-sa 6/no information DAL-sa 6/no information Daggertooth pike conger-sa 5/no information Cuskpout-sa 6/no information Crimson coral shrimp-

	sa 6/no information Cotylopus acutipinnis-sa 6/no information Comb venus-sa 6/no information Cobia-sa 6/no information Cholga mussel-sa 6/no information Chola guitarfish-sa 6/no information Chinese mitten crab-sa 6/no information Chilean mussel-sa 6/no information Channeled tun-sa 1/no information Chain moray-sa 5/no information Cero-sa 6/no information Centrobranchus andreae-sa 6/no information Castaneta-sa 6/no information Caspian anadromous shad-sa 6/no information Cape redfish-sa 6/no information Callinectes swimcrabs nei-sa 6/no information California lizardfish-sa 5/no information Calico scallop-sa 5/no information Butterfly bobtail squid-sa 6/no information Bull shark-sa 6/no information Brown driftfish-sa 6/no information Bronze croaker-sa 6/no information Brightbelly sculpin-sa 6/no information Brazilian sardinella-sa 6/no information Boeseman croaker-sa 6/no information Boeseman croaker-sa 1/no information Bocaccio rockfish-sa 6/no information Bocaccio rockfish-sa 1/no information Bobo mullet-sa 6/no information Bluespotted cornetfish-sa 6/no information Black seabass-sa 6/no information Black pomfret-sa 6/no information Black cusk-eel-sa 6/no information Blachea xenobranchialis-sa 6/no information Bigmouth skate-sa 6/no information Big-claw purple hermit crab-sa 1/no information Bifid clingfish-sa 6/no information Benthophilus baeri-sa 6/no information Benthophilus baeri-sa 1/no information Bent-beak murex-sa 6/no information BBD-sa 6/no information BAY-sa 6/no information Bathylagus gracilis-sa 6/no information Barbfish-sa 6/no information Balao halfbeak-sa 1/no information Atlantic searobins-sa 6/no information Atlantic seabob-sa 6/no information Atlantic bay scallop-sa 6/no information Atka mackerel-sa 6/no information Arabian carpetshark-sa 6/no information Angelfishes nei-sa 6/no information American shad-sa 6/no information American sea scallop-sa 6/no information
ESP-MBS-DFN-VL1218-NGI-NO-	Narrownose smooth-hound-sa 6/no information Yellowspotted skate-sa 6/no information Yellow-banded snapper-sa 6/no information Yamato shrimp-sa 6/no information XUX-sa 6/no information Wolf-herrings nei-sa 6/no information Windowpane flounder-sa 1/no information Whitespotted guitarfish-sa 6/no information Whitespotted filefish-sa 6/no information West coast seabream-sa 1/no information Warthead blenny-sa 6/no information Venus nux-sa 6/no information Vaquita-sa 1/no information UVL-sa 6/no information UUT-sa 6/no information UUG-sa 6/no information UMA-sa 6/no information Two-finned round herring-sa 1/no information Twobar seabream-sa 1/no information TTB-sa 6/no information Tongue bobtail squid-sa 6/no information Tonga escolar-sa 6/no information Timucu-sa 1/no information Ticon cownose ray-sa 6/no information Three-spot flounder-sa 1/no information Thorogobius angolensis-sa 6/no information TCZ-sa 6/no information Taquilla clams-sa 6/no information Swamp ghost crab-sa 6/no information Swamp ghost crab-sa 1/no information Striped grouper-sa 6/no information Striped catshark-sa 6/no information Stout squat lobster-sa 6/no information Stalix histrio-sa 6/no information SSE-sa 6/no information Spottail seabream-sa 6/no information Spotless smooth-hound-sa 2/no information Spadefishes nei-sa 6/no information Southern spiny lobster-sa 6/no information Southern spiny lobster-sa 1/no information Southeast Atlantic soles nei-sa 6/no information So-iny (redlip) mullet-sa 6/no information Softshell red crab-sa 6/no information Softshell red crab-sa 2/no information Sockeye(=Red) salmon-sa 6/no information Small abalone-sa 1/no information Slender conger-sa 6/no information Silver seabream-sa 1/no information Shortfin scad-sa 6/no information Sheepshead-sa 1/no information Sevenstar flying squid-sa 6/no information Serrulate whiptail-sa 6/no information Serra Spanish mackerel-sa 6/no information Sea urchins nei-sa 6/no information Scotsman seabream-sa 6/no information Santer seabream-sa 6/no information RSY-sa 6/no information RPH-sa 6/no information Round ray-sa 6/no information Rooster hind-sa 1/no information Ridge scaled rattail-sa 6/no information Red stumpnose seabream-sa 6/no information Red cusk-eel-sa 6/no information Red bait-sa 6/no information Ragworm-sa 6/no information Radiate semele-sa 6/no information Precious corals nei-sa 1/no information PQC-sa 1/no information Polititapes durus-sa 6/no information Pickhandle barracuda-sa 6/no information Pholidichthys anguis-sa 6/no information PGS-sa 6/no information Painted sweetlips-sa 1/no information Pacific razor clam-sa 6/no information Pacific menhaden-sa 6/no information Otophidium chickcharney-sa 6/no information Otophidium chickcharney-sa 1/no information Oplopomus caninoides-sa 1/no information NPN-sa 6/no information Northern red snapper-sa 6/no information Nineside toothshell-sa 6/no information NGC-sa 6/no information New Zealand mussel-sa 6/no information Mystriophis porphyreus-sa 6/no information Mosaic gulper shark-sa 6/no information Morwongs-sa 6/no information Monopenchelys acuta-sa 6/no information Momo, boke magai, misu coral-sa 6/no information MMR-sa 6/no information Mexican spiny loster-sa 6/no information McCain's skate-sa 1/no information Macha clam-sa 6/no information LVL-sa 6/no information Lumpfish(=Lumpsucker)-sa 6/no information Long-tailed butterfly ray-sa 6/no information Longfin squid-sa 6/no information LNV-sa 6/no information Lined catshark-sa 6/no information Leopard grouper-sa 6/no information Lenok-sa 6/no information Largescale flounder-sa 1/no information Largemouth black bass-sa 6/no information Lampadena urophaos-sa 6/no information Lake(=Common) whitefish-sa 6/no information Korean mussel-sa 6/no information KMY-sa 6/no information KKJ-sa 6/no information Japanese pilchard-sa 6/no information Indo-Pacific king mackerel-sa 6/no information Hebrew moon-shell-sa 6/no information Harbour spidercrab-sa 1/no information Gulf herring-sa 6/no information Guinea shrimp-sa 6/no information Gray starsnout-sa 6/no information Gracilaria seaweeds-sa 1/no information Glow-bellies, splitfins nei-sa 6/no information Gilchrist's round herring-sa 6/no information Giant Eastern Pacific conch-sa 6/no information Giant catfish-sa 6/no information Giant boarfish-sa 6/no information Geelbek croaker-sa 1/no information Gecko catshark-sa 1/no information Gal pagos

	four-eyed blenny-sa 6/no information Fortescue-sa 6/no information Flat-nosed pipefish-sa 6/no information EPZ-sa 1/no information EPR-sa 1/no information END-sa 6/no information ELO-sa 6/no information EKA-sa 1/no information Eelpouts nei-sa 6/no information Dwarf round herring-sa 6/no information Dogtooth herring-sa 6/no information Distorted mushroom coral-sa 6/no information Diadromous fishes nei-sa 6/no information Deepwater longtail red snapper-sa 1/no information CPE-sa 6/no information Cobia-sa 6/no information CIS-sa 6/no information Centrobranchus andreae-sa 6/no information Castaneta-sa 6/no information Cape redfish-sa 6/no information California lizardfish-sa 1/no information Bull shark-sa 6/no information BUC-sa 6/no information Broomtail grouper-sa 6/no information Broad skate-sa 6/no information Bothrocara alalongum-sa 6/no information Bocaccio rockfish-sa 6/no information Bobo mullet-sa 6/no information Blueskin seabream-sa 6/no information Bluelip parrotfish-sa 6/no information Blossom shrimp-sa 6/no information Blood cockle-sa 6/no information Black stone crab-sa 1/no information Black seabass-sa 6/no information Blachea xenobranchialis-sa 6/no information Bifid clingfish-sa 6/no information BGN-sa 6/no information Beach silverside-sa 6/no information BAY-sa 1/no information Bathysauropsis gigas-sa 6/no information Bathylagus gracilis-sa 6/no information Barred grunt-sa 6/no information AWN-sa 6/no information AVN-sa 6/no information Atlantic surf clam-sa 6/no information Atlantic searobins-sa 1/no information Arabian carpetshark-sa 6/no information AMG-sa 6/no information Akiami paste shrimp-sa 6/no information African mud shrimp-sa 6/no information ABP-sa 6/no information
ESP-MBS-DRB-VL0612-NGI-NO-	DXC-sa 1/no information Indian threadfish-sa 6/no information MSQ-sa 6/no information Smooth callista-sa 1/no information
ESP-MBS-DRB-VL1218-NGI-NO-	Atlantic searobins-sa 6/no information Sockeye(=Red) salmon-sa 6/no information Shango dragonet-sa 6/no information Pteragogus amboinensis-sa 6/no information Psammechinus miliaris-sa 6/no information Pacific menhaden-sa 6/no information Pacific cask shell-sa 6/no information Ornate angelshark-sa 6/no information NSK-sa 6/no information NGA-sa 6/no information Mosaic gulper shark-sa 6/no information Longfin squid-sa 6/no information Lenok-sa 6/no information KLT-sa 6/no information FES-sa 6/no information Chilean mussel-sa 6/no information Blood cockle-sa 6/no information Bathylagus gracilis-sa 6/no information Barred grunt-sa 6/no information Atlantic silverside-sa 6/no information
ESP-MBS-DTS-VL0612-NGI-NO-	Southern lemon sole-sa 6/no information Swamp ghost crab-sa 1/no information Swamp ghost crab-sa 6/no information Taquilla clams-sa 6/no information TON-sa 6/no information Underlined fig shell-sa 6/no information Undulated moray-sa 6/no information Urugayian lobster-sa 6/no information VEX-sa 6/no information Wels(=Som) catfish-sa 6/no information Yellowbelly rockcod-sa 6/no information Hottentot seabream-sa 6/no information Green jobfish-sa 6/no information DPJ-sa 6/no information Giant swimcrab-sa 6/no information Garnet coral-sa 6/no information Emperor nautilus-sa 6/no information AMI-sa 6/no information AMN-sa 6/no information Australian sawtail catshark-sa 6/no information Bali sardinella-sa 6/no information Bent-beak murex-sa 6/no information Boe drum-sa 6/no information BQS-sa 6/no information Brown driftfish-sa 6/no information California lizardfish-sa 6/no information Castaneta-sa 6/no information Daisy parrotfish-sa 6/no information Diadromous fishes nei-sa 6/no information Dolly varden-sa 6/no information Dombey's tagelus-sa 6/no information DRE-sa 6/no information ICA-sa 6/no information IEZ-sa 6/no information JBX-sa 6/no information Khadary-whitefish-sa 6/no information Lesser glass shrimp-sa 6/no information Longhead dab-sa 6/no information LPW-sa 6/no information Ornate spiny lobster-sa 6/no information Pacific anchoveta-sa 6/no information Pacific sleeper shark-sa 6/no information Red eel-sa 6/no information Rhinoceros leatherjacket-sa 6/no information Round scad-sa 6/no information Saddletail grouper-sa 6/no information Santer seabream-sa 6/no information Sao Paulo shrimp-sa 6/no information Scoophead-sa 6/no information Scotsman seabream-sa 6/no information Southern African pilchard-sa 6/no information
ESP-MBS-DTS-VL1218-NGI-NO-	Sillago-whitings-sa 6/no information Sillago-whitings-sa 1/no information Shorthead anchovy-sa 6/no information Sharptooth smooth-hound-sa 1/no information Sharp-spined notothenia-sa 1/no information Chola guitarfish-sa 1/no information Chocolate rockshell-sa 6/no information Chars nei-sa 6/no information CFL-sa 6/no information Centrobranchus andreae-sa 6/no information CCA-sa 6/no information Catalonian striped shrimp-sa 6/no information Catalonian striped shrimp-sa 1/no information Cape rock lobster-sa 6/no information California lizardfish-sa 1/no information Calico scallop-sa 5/no information Cabinza grunt-sa 1/no information Butterfly bobtail squid-sa 6/no information Buffalo sculpin-sa 6/no information Brownspotted catshark-sa 1/no information Brown spiny loster-sa 1/no information Broadfin sawtail catshark-sa 1/no information Brightbelly sculpin-sa 6/no information Brightbelly sculpin-sa 1/no information Brazilian groupers nei-sa 1/no information Bonga shad-sa 6/no information Bocaccio rockfish-sa 6/no information Blue mackerel-sa 6/no information Blue mackerel-sa 1/no information BLK-sa 6/no information Bleeker smoothbelly sardinella-sa 6/no information Black stone crab-sa 1/no information Blacksaddle herring-sa 6/no information Blacksaddle herring-sa 1/no information Black brotula-sa 1/no information Blachea xenobranchialis-sa 6/no information Blachea xenobranchialis-sa 1/no information Biglip grunt-sa 6/no information Bigfin anchovy-sa 6/no information Bifid clingfish-sa 6/no information Bering shrimp-sa 6/no information Benthophilus baeri-sa 6/no information Beach silverside-sa 6/no information BDT-sa 6/no information Bay anchovy-sa 1/no information Barracudinas, etc. nei-sa

6/no information Barbeled houndshark-sa 6/no information Barbeled catshark-sa 6/no information Aulotrachichthys novaezelandicus-sa 1/no information Atlantic searobins-sa 6/no information Atlantic searobins-sa 1/no information Atlantic sabretooth anchovy-sa 6/no information ARM-sa 6/no information Argentine anchovy-sa 6/no information Arctic rockling-sa 1/no information Arctic flounder-sa 6/no information Arctic flounder-sa 1/no information Apocryptes bato-sa 6/no information Antarctic armless flounder-sa 6/no information Anomalous lanternfish-sa 1/no information Angolan flying squid-sa 6/no information Andaman lobster-sa 6/no information American conger-sa 6/no information African spadefish-sa 1/no information African forktail snapper-sa 1/no information Aconcagua grenadier-sa 6/no information Acned snake-eel-sa 1/no information Shallow-water Cape hake-sa 1/no information Sevenstar flying squid-sa 6/no information Sevenstar flying squid-sa 1/no information SEP-sa 6/no information SEO-sa 6/no information Senegalese rockfish-sa 1/no information Sea snails-sa 6/no information Seabasses nei-sa 6/no information Scup-sa 6/no information Sawback poacher-sa 6/no information Satyrichthys adeni-sa 6/no information Saposhnikovi shad-sa 6/no information Sao Paulo shrimp-sa 6/no information Sao Paulo shrimp-sa 1/no information Sandyback stingaree-sa 6/no information Salvelinus leucomaenis-sa 6/no information Saddletail grouper-sa 6/no information RZX-sa 6/no information RYO-sa 5/no information RQC-sa 6/no information Round scad-sa 6/no information Robust bobtail squid-sa 1/no information Rhinoceros leatherjacket-sa 6/no information Red king crab-sa 1/no information Red codling-sa 6/no information Red bait-sa 6/no information Razor mud shrimp-sa 6/no information RAL-sa 1/no information Raja clarkii-sa 1/no information Queensland school mackerel-sa 6/no information QAL-sa 1/no information Purple brotula-sa 6/no information PRY-sa 6/no information Precious corals nei-sa 6/no information PQD-sa 6/no information Port Jackson shark-sa 1/no information Porgies-sa 1/no information Pogonophryne spp-sa 6/no information Pink(=Humpback) salmon-sa 6/no information Pickhandle barracuda-sa 1/no information Picarels, etc. nei-sa 6/no information Peruvian weakfish-sa 1/no information Peruvian calico scallop-sa 1/no information PAP-sa 1/no information Pandalopsis shrimps nei-sa 6/no information Pacific shrimps nei-sa 5/no information Pacific seabobs-sa 6/no information Pacific rock crab-sa 6/no information Pacific dog snapper-sa 1/no information Pacific burrfish-sa 6/no information OVM-sa 6/no information Otophidium chickcharney-sa 6/no information Otophidium chickcharney-sa 1/no information Other-sa 6/no information Ostichthys acanthorhinus-sa 6/no information Oplopomus caninoides-sa 6/no information Oplopomus caninoides-sa 1/no information Opisthocentrus dybowskii-sa 6/no information Oman cuttlefish-sa 1/no information OGG-sa 6/no information OEX-sa 6/no information OCK-sa 6/no information OBX-sa 6/no information New Zealand mussel-sa 6/no information New Zealand mussel-sa 1/no information Needlefishes nei-sa 6/no information Navaga(=Wachna cod)-sa 6/no information Natal spiny lobster-sa 6/no information Nassau grouper-sa 6/no information Narrowfin smooth-hound-sa 6/no information Nansenia ardesiaca-sa 6/no information MZY-sa 6/no information Mullet snapper-sa 1/no information MTY-sa 6/no information MSQ-sa 6/no information Moray cods nei-sa 6/no information Monocle breams-sa 6/no information MOA-sa 6/no information MMY-sa 6/no information Milkfish-sa 6/no information Midway deep-sea coral-sa 6/no information Mexican spiny loster-sa 6/no information MCG-sa 6/no information McCain's skate-sa 6/no information McCain's skate-sa 1/no information Manytooth conger-sa 6/no information Malabar blood snapper-sa 6/no information Madagascar nylon shrimp-sa 1/no information LVL-sa 6/no information LTW-sa 6/no information Longsnout butterfly ray-sa 6/no information Longfin squid-sa 6/no information Longfin squid-sa 5/no information Longfin bonefish-sa 6/no information Longfin African conger-sa 6/no information LMD-sa 6/no information Liza spp-sa 6/no information Lizard mantis-sa 6/no information Lingcod-sa 1/no information Liachirus melanospilus-sa 1/no information Letholycus magellanicus-sa 6/no information Lessonia spp-sa 6/no information LDY-sa 6/no information LDL-sa 6/no information LDI-sa 6/no information Lampadena urophaos-sa 6/no information Lake sturgeon-sa 6/no information Lagocephalus wheeleri-sa 1/no information KSU-sa 1/no information Knobby bobtail squid-sa 6/no information KKW-sa 1/no information JUL-sa 6/no information January octopus-sa 6/no information Italian deep-sea shrimp-sa 1/no information Indo-Pacific slender worm-eel-sa 6/no information Indo-Pacific king mackerel-sa 6/no information Indo-Pacific king mackerel-sa 1/no information Indian bait prawn-sa 1/no information IGD-sa 6/no information ICV-sa 6/no information IAK-sa 1/no information Hottentot seabream-sa 6/no information Horse mussels nei-sa 6/no information Hooktooth shark-sa 6/no information Honnibe croaker-sa 1/no information HMJ-sa 6/no information HJK-sa 6/no information Hebrew moon-shell-sa 6/no information Hardshell shrimp-sa 6/no information Harbour spidercrab-sa 1/no information Halfspined flathead-sa 1/no information HAA-sa 6/no information Gulf toadfish-sa 6/no information Gulaphallus bikolanus-sa 6/no information Guinea shrimp-sa 6/no information Green rock lobster-sa 6/no information Green birdmouth wrasse-sa 1/no information Grayspottted guitarfish-sa 1/no information GOU-sa 6/no information Goldlined seabream-sa 6/no information Golden threadfin bream-sa 6/no information Gobitrichinotus radiocularis-sa 6/no information Gobiopsis aporia-sa 6/no information Goatfishes-sa 6/no information Goatfishes-sa 1/no information Glassy flying squid-sa 6/no information GHX-sa 6/no information GFG-sa 6/no information Garnet coral-sa 6/no information FNG-sa 6/no information FLO-sa 6/no information Flamboyant cuttlefish-sa 1/no information FJE-sa 6/no information EZA-sa 6/no information Ericara niger-sa 6/no information ERB-sa 6/no information EOW-sa 6/no information EIS-sa 6/no information EDS-sa 6/no information Dusky smooth-hound-sa 6/no information Dotted gizzard shad-sa 6/no information Donkey croaker-sa 6/no information

	Dolphinfishes nei-sa 6/no information DLN-sa 6/no information DLL-sa 6/no information Disc-
ESP-MBS-DTS-VL1824-NGI-NO-	Velvet dogfish-sa 6/no information ABP-sa 6/no information Abyssal spiderfish-sa 6/no information ACU-sa 6/no information Aequorea aequorea-sa 6/no information African forktail snapper-sa 1/no information African forktail snapper-sa 6/no information African longfin eel-sa 6/no information African spadefish-sa 1/no information AJZ-sa 6/no information Akiami paste shrimp-sa 1/no information AKQ-sa 1/no information Alabama shad-sa 6/no information American conger-sa 1/no information American conger-sa 6/no information Amur sturgeon-sa 6/no information Anchoveta(=Peruvian anchovy)-sa 6/no information Andaman lobster-sa 6/no information Angolan flying squid-sa 6/no information Angular murex-sa 1/no information Apocryptes bato-sa 5/no information Apocryptes bato-sa 6/no information AQR-sa 6/no information AQS-sa 6/no information AQV-sa 6/no information Arctic flounder-sa 1/no information Arctic flounder-sa 6/no information Argentine anchovy-sa 6/no information Argentine menhaden-sa 6/no information Argobuccinum argus-sa 5/no information ARK-sa 6/no information Armoured shrimp-sa 1/no information Arm squids nei-sa 6/no information ART-sa 6/no information ASL-sa 1/no information Atlantic menhaden-sa 1/no information Atlantic seabasses-sa 6/no information Atlantic seabob-sa 6/no information Atlantic searobins-sa 2/no information Atlantic searobins-sa 6/no information Atlantic silverside-sa 6/no information Australian bonito-sa 1/no information AYR-sa 5/no information Ayu sweetfish-sa 7/no information BAA-sa 6/no information Baikal seal-sa 6/no information Baleen whales nei-sa 6/no information Barbeled catshark-sa 5/no information Barbeled catshark-sa 6/no information Bareskin dogfish-sa 6/no information Barred grunt-sa 1/no information Bartsch's squid-sa 6/no information Bay anchovy-sa 6/no information BAY-sa 1/no information BBP-sa 6/no information Beach silverside-sa 1/no information Beach silverside-sa 6/no information Beaked whales nei-sa 5/no information Beaked whales nei-sa 6/no information Bearded croaker-sa 6/no information BEF-sa 6/no information Beka squid-sa 6/no information Belanger's croaker-sa 6/no information Benthophilus baeri-sa 1/no information Benthophilus baeri-sa 6/no information BFA-sa 1/no information BFF-sa 6/no information BHZ-sa 6/no information Biglip grunt-sa 1/no information Bigmouth skate-sa 6/no information Blackfin barracuda-sa 6/no information Blacksaddle herring-sa 1/no information Blacksaddle herring-sa 6/no information Black seabass-sa 1/no information Blacktip sawtail catshark-sa 2/no information Bleeker smoothbelly sardinella-sa 6/no information BLK-sa 1/no information BLK-sa 6/no information Blood cockle-sa 6/no information Blue mackerel-sa 1/no information Blue mackerel-sa 5/no information Blue mackerel-sa 6/no information Blue squat lobster-sa 6/no information Bobo mullet-sa 6/no information Bobo mullet-sa 7/no information Bocaccio rockfish-sa 6/no information Bonefish-sa 6/no information Bonga shad-sa 6/no information Brama spp-sa 1/no information Brama spp-sa 5/no information Brama spp-sa 6/no information Brazilian groupers nei-sa 6/no information Broadgill catshark-sa 6/no information Brownback trevally-sa 6/no information Buffalo sculpin-sa 6/no information Bull shark-sa 6/no information Burmeister's porpoise-sa 6/no information Butterfly bobtail squid-sa 6/no information BVS-sa 6/no information Bythites islandicus-sa 6/no information Cabezon-sa 1/no information Cabinza grunt-sa 6/no information Calico scallop-sa 5/no information Callinectes swimcrabs nei-sa 1/no information Cape lobster-sa 1/no information Cape rock lobster-sa 1/no information Carcharhinus sharks nei-sa 1/no information Cardinalfishes, etc. nei-sa 1/no information Cardinalfishes, etc. nei-sa 6/no information Caribbean spiny lobster-sa 2/no information Guinean barracuda-sa 1/no information Guinean barracuda-sa 6/no information Guinean striped mojarra-sa 1/no information Guinean striped mojarra-sa 6/no information Gulf herring-sa 6/no information Gulper sharks nei-sa 1/no information GYY-sa 6/no information Halfspined flathead-sa 6/no information Hapuku wreckfish-sa 6/no information Hapuku wreckfish-sa 7/no information Harbour spidercrab-sa 1/no information Harbour spidercrab-sa 6/no information HBL-sa 6/no information Hebrew moon-shell-sa 6/no information HHE-sa 6/no information HHK-sa 6/no information HJK-sa 5/no information HJK-sa 6/no information HJZ-sa 6/no information HOQ-sa 6/no information Horned murex-sa 6/no information Hottentot seabream-sa 6/no information Humming-bird bobtail squid-sa 6/no information Hydrolagus alberti-sa 6/no information Hypopterus macropterus-sa 6/no information IDA-sa 6/no information IGD-sa 6/no information IID-sa 6/no information IID-sa 7/no information Indian bait prawn-sa 6/no information Indian halibut-sa 6/no information Indian red shrimp-sa 1/no information Indian red shrimp-sa 2/no information Indonesian golden crab-sa 6/no information Indo-Pacific king mackerel-sa 6/no information Indo-Pacific king mackerel-sa 7/no information Inland silverside-sa 6/no information Intermediate bobtail squid-sa 6/no information IOO-sa 6/no information IRA-sa 6/no information Izak catshark-sa 6/no information January octopus-sa 1/no information January octopus-sa 6/no information Japanese flying squid-sa 6/no information Japanese sand shrimp-sa 1/no information Japanese sand shrimp-sa 6/no information JBI-sa 1/no information JBI-sa 6/no information JHA-sa 6/no information JKI-sa 5/no information JNX-sa 1/no information JNX-sa 6/no information Jumbo flying squid-sa 1/no information Karanteen seabream-sa 6/no information KCK-sa 5/no information KEA-sa 6/no information Keeled mud lobster-sa 6/no information KHE-sa 1/no information King weakfish-sa 1/no information KLD-sa 6/no information KLO-sa 1/no information KWH-sa 6/no information KXP-sa 6/no information LAA-sa 1/no information LAA-sa 6/no information Lampadena urophaos-sa 6/no information Lamprogrammus brunswigi-sa 6/no information Largescale flounder-sa 1/no information Largescale flounder-sa 5/no information Largescale flounder-sa 6/no information Latchet(=Sharpbeak gurnard)-sa 6/no information Lavender jobfish-sa 6/no information LDL-sa 6/no information Leaftail croaker-

	sa 6/no information Leaping bonito-sa 6/no information Leather bass-sa 6/no information Leopard moray eel-sa 6/no information Lesser glass shrimp-sa 1/no information Letholycus magellanicus-sa 6/no information Little bay scallop-sa 6/no information Lizard mantis-sa 1/no information Lizard mantis-sa 6/no information LMD-sa 6/no information Longfin African conger-sa 6/no information Longfin bonefish-sa 6/no information Longfin squid-sa 1/no information Longfin squid-sa 5/no information Longfin squid-sa 6/no information Longnose sawshark-sa 6/no information Longspine porgy-sa 6/no information Longtail skate-sa 6/no information LRZ-sa 6/no information LSE-sa 6/no information LWH-sa 6/no information LZE-sa 6/no information Madokai's cuttlefish-sa 6/no information Magellanic rockcod-sa 5/no information Magnificent cuttlefish-sa 1/no information Malabar sprat-sa 1/no information Malabar sprat-sa 5/no information Malabar sprat-sa 6/no information Mangrove red snapper-sa 6/no information Maputo conger-sa 6/no information McCain's skate-sa 1/no information McCain's skate-sa 5/no information McCain's skate-sa 6/no information Metanephrops lobsters nei-sa 1/no information Mexican spiny loster-sa 6/no information MGV-sa 6/no information Mississippi paddlefish-sa 6/no information MJA-sa 6/no information MJU-sa 6/no information MLO-sa 6/no information MMU-sa 6/no information MOA-sa 6/no information Mojarras(=Silver-biddies) nei-sa 6/no information Monocle breams-sa 1/no information Monocle breams-sa 6/no information Moray cods nei-sa 6/no information Mottled fusilier-sa 6/no information Mountain mullet-sa 6/no information Mouse catshark-sa 6/no information MTY-sa 6/no information Muddy arrowtooth eel-sa 6/no information Muddy auger-sa 1/no information Mud spiny lobster-sa 6/no information MXA-sa 6/no information Nansenia ardesiaca-sa 6/no information Nansenia ardesiaca-sa 7/no information Narrowfin smoot
ESP-MBS-DTS-VL2440-NGI-NO-	OYU-sa 6/no information GEV-sa 6/no information Giant gelidium-sa 6/no information Glassy flying squid-sa 1/no information Goatfishes-sa 1/no information Goatfishes-sa 5/no information Goatfishes-sa 6/no information ACJ-sa 6/no information ACA-sa 6/no information Yellowtip halfbeak-sa 6/no information XYX-sa 6/no information WWB-sa 6/no information Wolf-herrings nei-sa 6/no information Whitespotted smooth-hound-sa 6/no information Whitespotted guitarfish-sa 5/no information Whitefishes nei-sa 6/no information White barbel-sa 6/no information West coast seabream-sa 1/no information Wellington shrimp-sa 6/no information WAG-sa 6/no information VMC-sa 6/no information Velvet dogfish-sa 6/no information ULA-sa 6/no information UEH-sa 6/no information TWP-sa 1/no information Two-row rock shell-sa 6/no information Two-finned round herring-sa 7/no information Two-finned round herring-sa 6/no information Twobar seabream-sa 7/no information Twobar seabream-sa 5/no information Twobar seabream-sa 1/no information IAM-sa 1/no information TQZ-sa 6/no information TCB-sa 6/no information Tallfin croaker-sa 6/no information SYV-sa 6/no information Swamp ghost crab-sa 7/no information Swamp ghost crab-sa 6/no information Swamp ghost crab-sa 5/no information Striped eel catfish-sa 6/no information Steenstrup's bobtail squid-sa 7/no information Spotted eagle ray-sa 1/no information Spotted dolphins nei-sa 6/no information Spikefin goby-sa 6/no information Southern spider crab-sa 5/no information Solenocerid shrimps nei-sa 6/no information Softshell red crab-sa 6/no information Snaky klipfish-sa 6/no information Smooth nylon shrimp-sa 1/no information Smoothlip stargazer-sa 6/no information Smooth dosinia-sa 5/no information Smooth dosinia-sa 1/no information Smalltooth weakfish-sa 1/no information Slender grouper-sa 1/no information SJZ-sa 6/no information Silver-stripe round herring-sa 5/no information Silver seabream-sa 1/no information Shoulderspot grenadier-sa 5/no information Sharptooth smooth-hound-sa 1/no information SGA-sa 6/no information Sevenstar flying squid-sa 6/no information Sevenstar flying squid-sa 5/no information Serra Spanish mackerel-sa 6/no information Seabasses nei-sa 6/no information Rusty jobfish-sa 6/no information RTH-sa 6/no information RSJ-sa 6/no information RQB-sa 5/no information Round ray-sa 5/no information Rockhead-sa 6/no information RKB-sa 6/no information Rio skate-sa 6/no information Regan's anchovy-sa 6/no information Red swimcrab-sa 1/no information Red king crab-sa 1/no information Red codling-sa 6/no information Red codling-sa 1/no information Ragworm-sa 6/no information RAA-sa 6/no information RAA-sa 5/no information Queen crab-sa 6/no information QCA-sa 6/no information PQD-sa 6/no information Port Jackson shark-sa 6/no information Pomfrets, ocean breams nei-sa 6/no information Polymetme corythaeola-sa 6/no information Polkadot catshark-sa 5/no information Peacock hind-sa 5/no information Pandalopsis shrimps nei-sa 1/no information Pale toadfish-sa 5/no information Pacific herring-sa 6/no information Pacific burrfish-sa 5/no information GEC-sa 5/no information Opalescent inshore squid-sa 6/no information ONC-sa 6/no information Nototodarus flying squids nei-sa 1/no information Northern smoothtounge-sa 6/no information Northern pink shrimp-sa 1/no information NIZ-sa 6/no information NES-sa 5/no information Needle dogfish-sa 6/no information Nansenia ardesiaca-sa 6/no information MZA-sa 1/no information MYR-sa 6/no information Mouse catshark-sa 1/no information Mountain mullet-sa 6/no information Monocle breams-sa 5/no information Mojarras(=Silver-biddies) nei-sa 6/no information MOA-sa 6/no information MOA-sa 5/no information Metanephrops lobsters nei-sa 6/no information Metanephrops lobsters nei-sa 1/no information Meagres nei-sa 6/no information McCain's skate-sa 5/no information McCain's skate-sa 1/no information Mauritian sardinella-sa 6/no information Malabar grouper-sa 7/no information LQW-sa 6/no information Andaman lobster-sa 1/no information Akiami paste shrimp-sa 1/no information AGG-sa 6/no information African forktail snapper-sa 1/no information Aconcagua grenadier-sa 6/no information HXW-sa 6/no information Longfin squid-sa 6/no information Longfin African conger-sa 6/no information LOA-sa 6/no information LGS-sa 6/no information LEY-sa 5/no

	information Lesser glass shrimp-sa 1/no information Lesser devil ray-sa 6/no information Lake sturgeon-sa 6/no information KXX-sa 6/no information KKX-sa 6/no information KHE-sa 6/no information KEA-sa 6/no information KEA-sa 5/no information Karanteen seabream-sa 1/no information Jumbo flying squid-sa 1/no information JCH-sa 7/no information JBI-sa 5/no information Japanese sand shrimp-sa 6/no information Japanese sand shrimp-sa 1/no information January octopus-sa 1/no information Island inshore squid-sa 1/no information IOO-sa 6/no information IBA-sa 6/no information HIO-sa 6/no information HHK-sa 6/no information Hebrew moon-shell-sa 6/no information HBF-sa 5/no information Harbour spidercrab-sa 7/no information Harbour spidercrab-sa 1/no information Hapuku wreckfish-sa 5/no information Halfspined flathead-sa 6/no information Guinean striped mojarra-sa 5/no information Guinean barracuda-sa 6/no information GUF-sa 7/no information Grey bonnet-sa 2/no information Golden trevally-sa 5/no information Gobitrichinotus radiocularis-sa 5/no information Andaman lobster-sa 6/no information AQS-sa 6/no information AQT-sa 6/no information Aristeus shrimps nei-sa 1/no information AUD-sa 7/no information Australian bonito-sa 1/no information Australian bonito-sa 6/no information AVJ-sa 6/no information BAA-sa 6/no information Baleen whales nei-sa 6/no information Barred grunt-sa 5/no information Barred grunt-sa 6/no information Benthophiloides brauneri-sa 5/no information Benthophiloides brauneri-sa 6/no information Bicolor jack-sa 5/no information Bicolor jack-sa 6/no information Bigeye inshore squid-sa 1/no information Bigeyes nei-sa 6/no information Black corals and thorny corals-sa 5/no information Black corals and thorny corals-sa 6/no information Blackfin scad-sa 1/no information Black gemfish-sa 6/no information Blacksaddle herring-sa 6/no information Black seabass-sa 6/no information Blackspot shark-sa 6/no information Blue mackerel-sa 1/no information Bobo mullet-sa 6/no information Bocaccio rockfish-sa 6/no information Bonefish-sa 6/no information Brama spp-sa 1/no information BRK-sa 6/no information Brock's pipefish-sa 6/no information Burmeister's porpoise-sa 6/no information California lizardfish-sa 5/no information Cardinalfishes, etc. nei-sa 1/no information Caribbean reef octopus-sa 6/no information Catalonian striped shrimp-sa 6/no information Chinese icefish-sa 6/no information CIK-sa 6/no information CIK-sa 7/no information Comb shrimp-sa 6/no information Coral catshark-sa 1/no information Creole damsel-sa 6/no information Cylindrical razor shell-sa 1/no information Cylindrical razor shell-sa 6/no information Daggernose shark-sa 5/no information Daisy parrotfish-sa 6/no information Dall's porpoise-sa 6/no information Deep-water mud lobster-sa 6/no information Diadromous fishes nei-sa 6/no information Diadromous fishes nei-sa 7/no information Disc-fin squids nei-sa 6/no information Discrepant venus-sa 5/no information Dogfishes nei-sa 5/no information DSA-sa 6/no information Dusky smooth-hound-sa 1/no information ELD-sa 6/no information Equilateral venus-sa 6/no information ERB-sa 5/no information FBA-sa 5/no information Flappy snake-eel-sa 6/no information FQB-sa 5/no information FQB-sa 6/no information FXB-sa 6/no information Garibaldi damselfish-sa 6/no information GDJ-sa 6/no information
ESP-MBS-FPO-VL0612-NGI-NO-	Boa catshark-sa 1/no information Tudor's flounder-sa 6/no information Sockeye(=Red) salmon-sa 6/no information Shiba shrimp-sa 6/no information Serrulate whiptail-sa 1/no information Round scad-sa 1/no information Raja compagnoi-sa 1/no information Lenok-sa 6/no information Lake(=Common) whitefish-sa 1/no information Guntea loach-sa 1/no information Flat toadfish-sa 1/no information Flabellum cup corals nei-sa 1/no information Castaneta-sa 1/no information Butterfly fan lobster-sa 6/no information
ESP-MBS-FPO-VL1218-NGI-NO-	Long-tailed butterfly ray-sa 1/no information LWK-sa 1/no information Mosaic gulper shark-sa 6/no information Olive grouper-sa 3/no information Olive grouper-sa 6/no information Otophidium chickcharney-sa 6/no information Peacock hind-sa 6/no information Red codling-sa 6/no information RRE-sa 6/no information Silver pomfrets nei-sa 6/no information ARW-sa 6/no information WAG-sa 1/no information Antarctic armless flounder-sa 6/no information AGG-sa 6/no information Abyssal spiderfish-sa 6/no information Spotless smooth-hound-sa 6/no information Atlantic searobins-sa 6/no information Bathylagus gracilis-sa 6/no information Canary rockfish-sa 6/no information Deep-water mud lobster-sa 6/no information Glassy flying squid-sa 6/no information Green birdmouth wrasse-sa 1/no information Japanese sand shrimp-sa 1/no information Japanese sand shrimp-sa 2/no information Japanese sand shrimp-sa 3/no information Japanese sand shrimp-sa 4/no information King weakfish-sa 6/no information Lagocephalus wheeleri-sa 1/no information Lenok-sa 6/no information
ESP-MBS-HOK-VL0612-NGI-LLD-	West African ladyfish-sa 5/no information
ESP-MBS-HOK-VL0612-NGI-NO-	MMY-sa 6/no information Atlantic searobins-sa 6/no information Ayu sweetfish-sa 6/no information Barred grunt-sa 6/no information Bathysauropsis gigas-sa 6/no information Bifid clingfish-sa 6/no information Blood-stained turbo-sa 6/no information Bocaccio rockfish-sa 6/no information Castaneta-sa 6/no information CVM-sa 6/no information Day's round herring-sa 6/no information Diadromous fishes nei-sa 6/no information Fleshy dilsea-sa 6/no information Giant boarfish-sa 6/no information Glow-bellies, splitfins nei-sa 6/no information Indian mackerel-sa 6/no information Largemouth black bass-sa 6/no information Longnose sawshark-sa 6/no information Opalescent inshore squid-sa 5/no information Panga seabream-sa 6/no information Peruvian weakfish-sa 6/no information Shango dragonet-sa 6/no information Softshell red crab-sa 6/no information Two-finned round herring-sa 6/no information West African ladyfish-sa 6/no information Whitespotted

	conger-sa 6/no information WSP-sa 6/no information WSZ-sa 6/no information
ESP-MBS-HOK-VL1218-NGI-LLD-	Tiger shark-sa 6/no information Brama spp-sa 6/no information Black pomfret-sa 5/no information
ESP-MBS-HOK-VL1218-NGI-NO-	BSL-sa 6/no information Bull shark-sa 6/no information Canary rockfish-sa 6/no information Colorado snapper-sa 6/no information Daggernose shark-sa 5/no information Diadromous fishes nei-sa 6/no information Diadromous fishes nei-sa 7/no information Dolphinfishes nei-sa 6/no information Fleshfish-sa 6/no information Garnet coral-sa 6/no information Glassy flying squid-sa 9/no information Goldstripe sardinella-sa 6/no information Gurgesiella atlantica-sa 6/no information Brama spp-sa 9/no information Longfin squid-sa 6/no information McCain's skate-sa 5/no information MMI-sa 6/no information Nervous shark-sa 6/no information Nimble spray crab-sa 5/no information Nurse shark-sa 11.2/no information PBX-sa 6/no information Peacock hind-sa 5/no information Pink ear emperor-sa 6/no information RBA-sa 6/no information Red codling-sa 12/no information RTA-sa 6/no information Shango dragonet-sa 6/no information Southern bluefin tuna-sa 6/no information Spadenose shark-sa 6/no information Stout bobtail squid-sa 6/no information Western school shrimp-sa 6/no information YOM-sa 6/no information GZS-sa 6/no information Broomtail grouper-sa 6/no information BRY-sa 6/no information African forktail snapper-sa 12/no information AGG-sa 12/no information American conger-sa 5/no information American gizzard shad-sa 6/no information Argentine conger-sa 6/no information Argentine menhaden-sa 1/no information Atlantic searobins-sa 6/no information Bigthorn skate-sa 6/no information Blachea xenobranchialis-sa 6/no information Bocaccio rockfish-sa 6/no information Brama spp-sa 11.2/no information Brama spp-sa 6/no information
ESP-MBS-HOK-VL1824-NGI-LLD-	Brama spp-sa 6/no information Tiger shark-sa 5/no information Tiger shark-sa 6/no information Perinereis spp-sa 6/no information IJO-sa 5/no information
ESP-MBS-HOK-VL1824-NGI-NO-	Atlantic bluefin tuna-sa 3/no information
ESP-MBS-HOK-VL2440-NGI-LLD-	swo-med/assessed swo-na/assessed
ESP-MBS-PMP-VL0006-NGI-NO-	Gilthead seabream-sa 6/no information Common octopus-sa 1/no information Caramote prawn-sa 6/no information Senegalese sole-sa 6/no information European seabass-sa 6/no information Common octopus-sa 6/no information River eels nei-sa 6/no information Blue crab-sa 6/no information Common cuttlefish-sa 1/no information Common sole-sa 6/no information Greater amberjack-sa 1/no information Sand steenbras-sa 6/no information
ESP-MBS-PMP-VL0612-NGI-NO-	Swamp ghost crab-sa 6/no information TSA-sa 6/no information Two-finned round herring-sa 6/no information UFK-sa 6/no information UUT-sa 6/no information VFW-sa 6/no information Whitespotted smooth-hound-sa 6/no information Atlantic searobins-sa 5/no information Barbeled catshark-sa 6/no information Bifid clingfish-sa 6/no information Boa catshark-sa 6/no information BUC-sa 6/no information Canary rockfish-sa 6/no information Centrobranchus andreae-sa 6/no information Diadromous fishes nei-sa 6/no information Dwarf sawfish-sa 6/no information Finetooth shark-sa 1/no information Hooktooth shark-sa 6/no information Japanese pilchard-sa 1/no information Leopard skate-sa 1/no information Lesser devil ray-sa 6/no information Longfin squid-sa 6/no information Malabar blood snapper-sa 6/no information MUJ-sa 6/no information Nervous shark-sa 1/no information OAN-sa 1/no information Pacific sleeper shark-sa 6/no information Porgies-sa 5/no information Raja macrocauda-sa 1/no information Randall's threadfin bream-sa 6/no information Rough scad-sa 6/no information Sand smelts nei-sa 6/no information Serra Spanish mackerel-sa 5/no information Serrulate whiptail-sa 6/no information Shango dragonet-sa 5/no information Silver seatrout-sa 6/no information Spotted sicklefish-sa 6/no information Streaked seerfish-sa 1/no information SWD-sa 6/no information
ESP-MBS-PMP-VL1218-NGI-NO-	Bocaccio rockfish-sa 6/no information Castaneta-sa 6/no information DGY-sa 6/no information Izak catshark-sa 6/no information New Zealand mussel-sa 6/no information Phalium spp-sa 6/no information Pickhandle barracuda-sa 6/no information Ridgeback shrimp-sa 6/no information Ridge scaled rattail-sa 6/no information Robust bobtail squid-sa 6/no information RPF-sa 6/no information Sackfish-sa 6/no information Scaled sardines-sa 6/no information Sharptooth smooth-hound-sa 6/no information Smoothbelly sardinella-sa 6/no information Solivomer arenidens-sa 6/no information Spadenose shark-sa 6/no information Stripey-sa 6/no information Whitehead's round herring-sa 6/no information Yamato shrimp-sa 6/no information Barred grunt-sa 6/no information Blossom shrimp-sa 6/no information
ESP-MBS-PS-VL0612-NGI-NO-	Softshell red crab-sa 1/no information Aconcagua grenadier-sa 1/no information AXA-sa 6/no information pil-gsa01-03/no information pil-gsa01/no information Atlantic horse mackerel-sa 1/no information Atlantic bonito-sa 1/no information pil-gsa06/assessed
ESP-MBS-PS-VL1218-NGI-NO-	Buccaneer anchovy-sa 1/no information Blue mackerel-sa 6/no information Blue mackerel-sa 5/no information Blue mackerel-sa 3/no information Blue mackerel-sa 1/no information Bali sardinella-sa 1/no information Australian bonito-sa 6/no information Australian bonito-sa 1/no information Atlantic menhaden-sa 6/no information Atlantic menhaden-sa 1/no information Atlantic fanfish-sa

	1/no information Argentine menhaden-sa 6/no information White-edged lyretail-sa 1/no information Wels(=Som) catfish-sa 6/no information Twobar seabream-sa 1/no information Torpedo scad-sa 6/no information Stolephorus anchovies nei-sa 6/no information Spiny plunderfishes nei-sa 1/no information Spinefeet(=Rabbitfishes) nei-sa 1/no information Sawfishes-sa 1/no information Regan's anchovy-sa 1/no information Pacific ilisha-sa 1/no information Malabar sprat-sa 6/no information Malabar sprat-sa 4/no information Malabar sprat-sa 1/no information KZS-sa 1/no information King soldier bream-sa 1/no information Karanteen seabream-sa 1/no information Hemiramphus spp-sa 1/no information HBR-sa 1/no information Hapuku wreckfish-sa 1/no information Halfspined flathead-sa 1/no information Guinean barracuda-sa 6/no information Guinean barracuda-sa 1/no information Greenback horse mackerel-sa 1/no information Glassy flying squid-sa 6/no information False abalone-sa 6/no information Easter damselfish-sa 1/no information Dolly varden-sa 5/no information Diadromous fishes nei-sa 6/no information Daggerhead breams nei-sa 1/no information Abyssal spiderfish-sa 1/no information
ESP-MBS-PS-VL1824-NGI-NO-	Argentine anchovy-sa 6/no information WAG-sa 6/no information Twobar seabream-sa 6/no information Stolephorus anchovies nei-sa 6/no information Slender grouper-sa 6/no information Silver seabream-sa 6/no information Silver pomfrets nei-sa 6/no information Sharptail shortfin squid-sa 6/no information Seabasses nei-sa 7/no information Seabasses nei-sa 6/no information NYS-sa 1/no information Mountain mullet-sa 6/no information Menhadens nei-sa 6/no information Malabar sprat-sa 6/no information Malabar sprat-sa 1/no information Karanteen seabream-sa 6/no information Karanteen seabream-sa 1/no information JNX-sa 6/no information Japanese jack mackerel-sa 6/no information Indian mottled eel-sa 6/no information HBR-sa 1/no information Guinean barracuda-sa 6/no information Guinean barracuda-sa 1/no information Goldspot mullet-sa 6/no information Glassy flying squid-sa 6/no information Glassy flying squid-sa 1/no information Emperors(=Scavengers) nei-sa 6/no information Emperors(=Scavengers) nei-sa 1/no information Boeseman croaker-sa 1/no information Blue mackerel-sa 6/no information Blue mackerel-sa 4/no information Blue mackerel-sa 1/no information Bleeker smoothbelly sardinella-sa 6/no information Black pomfret-sa 6/no information Barred angelfish-sa 6/no information Ballyhoo halfbeak-sa 1/no information Australian bonito-sa 6/no information Australian bonito-sa 1/no information Atlantic menhaden-sa 6/no information Atlantic menhaden-sa 1/no information Argentine menhaden-sa 6/no information Argentine menhaden-sa 1/no information American harvestfish-sa 6/no information
ESP-MBS-PS-VL2440-NGI-NO-	Blue mackerel-sa 1/no information Atlantic silverside-sa 6/no information Bleeker smoothbelly sardinella-sa 6/no information Blue mackerel-sa 6/no information Emperors(=Scavengers) nei-sa 6/no information ERN-sa 6/no information Glassy flying squid-sa 6/no information Malabar sprat-sa 6/no information Painted sweetlips-sa 6/no information PSA-sa 6/no information Sharptail shortfin squid-sa 6/no information UMA-sa 1/no information
FRA-MBS-DFN-VL0006-NGI--	sbg-gsa07/no information Mugil spp-sa 7/no information bss-gsa07/no information European eel-sa 7/no information White seabream-sa 7/no information
FRA-MBS-DFN-VL0612-NGI--	sbg-gsa07/no information Mugil spp-sa 7/no information bss-gsa07/no information Octopuses, etc. nei-sa 7/no information White seabream-sa 7/no information Surmullets(=Red mullets) nei-sa 7/no information Soles nei-sa 7/no information Spiny lobsters nei-sa 7/no information Symphodus wrasses nei-sa 7/no information swo-med/assessed Common spiny lobster-sa 8/no information Porgies, seabreams nei-sa 7/no information Cuttlefish, bobtail squids nei-sa 7/no information hke-gsa01_05_06_07/assessed hke-gsa07/assessed mon-gsa01_05_06_07/no information European eel-sa 7/no information
FRA-MBS-DFN-VL1218-NGI--	sol-gsa07/no information Octopuses, etc. nei-sa 7/no information hke-gsa07/assessed hke-gsa01_05_06_07/assessed Common spiny lobster-sa 8/no information Atlantic mackerel-sa 7/no information Purple dye murex-sa 7/no information
FRA-MBS-DRB-VL0612-NGI--	Purple dye murex-sa 7/no information Octopuses, etc. nei-sa 7/no information
FRA-MBS-DTS-VL1824-NGI--	Common octopus-sa 7/no information Octopuses, etc. nei-sa 7/no information Inshore squids nei-sa 7/no information sol-gsa07/no information mon-gsa01_05_06_07/no information Common cuttlefish-sa 7/no information hke-gsa01_05_06_07/assessed hke-gsa07/assessed European common squid-sa 7/no information Atlantic mackerel-sa 7/no information Brill-sa 7/no information Purple dye murex-sa 7/no information Surmullet-sa 7/no information mut-gsa07/assessed
FRA-MBS-DTS-VL2440-NGI--	mon-gsa01_05_06_07/no information Octopuses, etc. nei-sa 7/no information Common octopus-sa 7/no information hke-gsa01_05_06_07/assessed hke-gsa07/assessed Inshore squids nei-sa 7/no information sol-gsa07/no information Surmullet-sa 7/no information European anchovy-sa 7/no information Shortfin squids nei-sa 7/no information Poor cod-sa 7/no information Atlantic mackerel-sa 7/no information Deep-water rose shrimp-sa 7/no information Brill-sa 7/no information Common cuttlefish-sa 7/no information
FRA-MBS-FPO-VL0006-NGI--	European eel-sa 7/no information sbg-gsa07/no information
FRA-MBS-FPO-VL0612-NGI--	Octopuses, etc. nei-sa 7/no information European eel-sa 7/no information sbg-gsa07/no

	information
FRA-MBS-HOK-VL0006-NGI--	sbg-gsa07/no information bss-gsa07/no information Blackspot(=red) seabream-sa 7/no information European eel-sa 7/no information White seabream-sa 7/no information European conger-sa 7/no information Porgies, seabreams nei-sa 7/no information
FRA-MBS-HOK-VL0612-NGI--	bft-ea/no information swo-med/assessed
FRA-MBS-HOK-VL1218-NGI--	bft-ea/no information
FRA-MBS-PGO-VL0006-NGI--	Sea urchins, etc. nei-sa 7/no information Tellins nei-sa 7/no information European eel-sa 7/no information Stony sea urchin-sa 8/no information Mediterranean mussel-sa 7/no information
FRA-MBS-PGO-VL0612-NGI--	Sea urchins, etc. nei-sa 7/no information Mediterranean mussel-sa 7/no information Purple dye murex-sa 7/no information swo-med/assessed
FRA-MBS-PGP-VL0006-NGI--	sbg-gsa07/no information European eel-sa 7/no information bss-gsa07/no information Mugil spp-sa 7/no information
FRA-MBS-PGP-VL0612-NGI--	Octopuses, etc. nei-sa 7/no information sbg-gsa07/no information European eel-sa 7/no information bss-gsa07/no information Changeable nassa-sa 7/no information White seabream-sa 7/no information Mugil spp-sa 7/no information Soles nei-sa 7/no information
FRA-MBS-PMP-VL0006-NGI--	Sea urchins, etc. nei-sa 7/no information sbg-gsa07/no information European eel-sa 7/no information
FRA-MBS-PMP-VL0612-NGI--	sbg-gsa07/no information European eel-sa 7/no information swo-med/assessed bss-gsa07/no information Mugil spp-sa 7/no information Octopuses, etc. nei-sa 7/no information White seabream-sa 7/no information Wreckfish-sa 8/no information Spiny lobsters nei-sa 7/no information
FRA-MBS-PS-VL0612-NGI--	European pilchard(=Sardine)-sa 7/no information sbg-gsa07/no information bss-gsa07/no information swo-med/assessed Greater amberjack-sa 8/no information Octopuses, etc. nei-sa 7/no information
FRA-MBS-PS-VL1218-NGI--	European pilchard(=Sardine)-sa 7/no information
FRA-MBS-TM-VL2440-NGI--	European anchovy-sa 7/no information European pilchard(=Sardine)-sa 7/no information
GRC-MBS-DTS-VL1218-NGI--	Picarel-sa 22/no information Bogue-sa 22/no information European squid-sa 22/no information Picarel-sa 20/no information Common pandora-sa 22/no information mut-gsa22/no information
GRC-MBS-PS-VL1218-NGI--	ane-gsa22/assessed pil-gsa22_23/assessed pil-gsa22/assessed Bogue-sa 22/no information VMA-sa 22/no information Atlantic bonito-sa 22/no information Atlantic horse mackerel-sa 22/no information European pilchard(=Sardine)-sa 20/no information
GRC-MBS-PS-VL1824-NGI--	ane-gsa22/assessed pil-gsa22_23/assessed pil-gsa22/assessed VMA-sa 22/no information European pilchard(=Sardine)-sa 20/no information
HRV-MBS-DFN-VL0006-NGI--	Gilthead seabream-sa 17/no information ctc-gsa17_18/assessed Mullets nei-sa 17/no information Red scorpionfish-sa 17/no information European seabass-sa 17/no information sol-gsa17/assessed Common octopus-sa 17/no information Salema-sa 17/no information Common dentex-sa 17/no information Common two-banded seabream-sa 17/no information hke-gsa17_18_stecf/assessed hke-gsa17_18/assessed Saddled seabream-sa 17/no information Common spiny lobster-sa 17/no information
HRV-MBS-DFN-VL0612-NGI--	sol-gsa17/assessed Gilthead seabream-sa 17/no information Red scorpionfish-sa 17/no information Common spiny lobster-sa 17/no information Common dentex-sa 17/no information ctc-gsa17_18/assessed Turbot-sa 17/no information Common octopus-sa 17/no information John dory-sa 17/no information hke-gsa17_18/assessed hke-gsa17_18_stecf/assessed Salema-sa 17/no information Mullets nei-sa 17/no information
HRV-MBS-DFN-VL1218-NGI--	sol-gsa17/assessed Turbot-sa 17/no information European squid-sa 17/no information Gilthead seabream-sa 17/no information dps-gsa17_18_19/assessed hke-gsa17_18_stecf/assessed hke-gsa17_18/assessed
HRV-MBS-DRB-VL0612-NGI--	sol-gsa17/assessed Great Mediterranean scallop-sa 17/no information European flat oyster-sa 17/no information Horned and musky octopuses-sa 17/no information ctc-gsa17_18/assessed
HRV-MBS-DRB-VL1218-NGI--	sol-gsa17/assessed Great Mediterranean scallop-sa 17/no information Marine fishes nei-sa 17/no information Horned and musky octopuses-sa 17/no information European flat oyster-sa 17/no information ctc-gsa17_18/assessed
HRV-MBS-DTS-VL0006-NGI--	Picarel-sa 17/no information Mediterranean sand smelt-sa 17/no information Greater amberjack-sa 17/no information Mullets nei-sa 17/no information Bogue-sa 17/no information Atlantic bonito-sa 17/no information

HRV-MBS-DTS-VL0612-NGI--	mut-gsa17_18/assessed nep-gsa17_18/assessed hke-gsa17_18/assessed hke-gsa17_18_stecf/assessed Horned and musky octopuses-sa 17/no information dps-gsa17_18_19/assessed European squid-sa 17/no information John dory-sa 17/no information Picarel-sa 17/no information Raja rays nei-sa 17/no information Monkfishes nei-sa 17/no information ctc-gsa17_18/assessed
HRV-MBS-DTS-VL1218-NGI--	mut-gsa17_18/assessed dps-gsa17_18_19/assessed hke-gsa17_18/assessed hke-gsa17_18_stecf/assessed nep-gsa17_18/assessed Horned and musky octopuses-sa 17/no information European squid-sa 17/no information John dory-sa 17/no information sol-gsa17/assessed
HRV-MBS-DTS-VL1824-NGI--	dps-gsa17_18_19/assessed nep-gsa17_18/assessed hke-gsa17_18/assessed hke-gsa17_18_stecf/assessed mut-gsa17_18/assessed
HRV-MBS-DTS-VL2440-NGI--	nep-gsa17_18/assessed dps-gsa17_18_19/assessed hke-gsa17_18/assessed hke-gsa17_18_stecf/assessed mut-gsa17_18/assessed
HRV-MBS-FPO-VL0006-NGI--	nep-gsa17_18/assessed Common octopus-sa 17/no information Gilthead seabream-sa 17/no information European lobster-sa 17/no information
HRV-MBS-FPO-VL0612-NGI--	nep-gsa17_18/assessed Common octopus-sa 17/no information
HRV-MBS-HOK-VL0006-NGI--	Common octopus-sa 17/no information Red scorpionfish-sa 17/no information swo-med/assessed Gilthead seabream-sa 17/no information Gurnards, searobins nei-sa 17/no information European squid-sa 17/no information hke-gsa17_18/assessed hke-gsa17_18_stecf/assessed Common dentex-sa 17/no information John dory-sa 17/no information
HRV-MBS-HOK-VL0612-NGI--	bft-ea/no information Gurnards, searobins nei-sa 17/no information swo-med/assessed hke-gsa17_18/assessed hke-gsa17_18_stecf/assessed Common dentex-sa 17/no information Red scorpionfish-sa 17/no information
HRV-MBS-HOK-VL1218-NGI--	bft-ea/no information swo-med/assessed
HRV-MBS-MGO-VL0612-NGI--	Sea urchins, etc. nei-sa 17/no information Warty venus-sa 17/no information Common octopus-sa 17/no information Anthozoa-sa 17/no information Gilthead seabream-sa 17/no information
HRV-MBS-PGP-VL0006-NGI--	European squid-sa 17/no information Gilthead seabream-sa 17/no information Common octopus-sa 17/no information Mullets nei-sa 17/no information hke-gsa17_18/assessed hke-gsa17_18_stecf/assessed Surmullet-sa 17/no information Marine fishes nei-sa 17/no information European seabass-sa 17/no information Picarel-sa 17/no information Red scorpionfish-sa 17/no information Atlantic bonito-sa 17/no information Common two-banded seabream-sa 17/no information
HRV-MBS-PGP-VL0612-NGI--	Gilthead seabream-sa 17/no information European squid-sa 17/no information Common spiny lobster-sa 17/no information Common octopus-sa 17/no information Red scorpionfish-sa 17/no information European seabass-sa 17/no information ctc-gsa17_18/assessed Common dentex-sa 17/no information hke-gsa17_18_stecf/assessed hke-gsa17_18/assessed Red porgy-sa 17/no information sol-gsa17/assessed Surmullet-sa 17/no information
HRV-MBS-PMP-VL0006-NGI--	Common octopus-sa 17/no information Gilthead seabream-sa 17/no information European squid-sa 17/no information Common dentex-sa 17/no information European seabass-sa 17/no information Red scorpionfish-sa 17/no information White seabream-sa 17/no information Salema-sa 17/no information Mullets nei-sa 17/no information ctc-gsa17_18/assessed Common two-banded seabream-sa 17/no information John dory-sa 17/no information
HRV-MBS-PMP-VL0612-NGI--	Common octopus-sa 17/no information sol-gsa17/assessed European squid-sa 17/no information Common dentex-sa 17/no information John dory-sa 17/no information swo-med/assessed Picarel-sa 17/no information ctc-gsa17_18/assessed Red scorpionfish-sa 17/no information Gilthead seabream-sa 17/no information Greater amberjack-sa 17/no information Common spiny lobster-sa 17/no information Big-scale sand smelt-sa 17/no information Common two-banded seabream-sa 17/no information mut-gsa17_18/assessed
HRV-MBS-PS-VL0612-NGI--	pil-gsa17_18/assessed ane-gsa17_18/assessed Greater amberjack-sa 17/no information Atlantic bonito-sa 17/no information European sprat-sa 17/no information
HRV-MBS-PS-VL1218-NGI--	pil-gsa17_18/assessed ane-gsa17_18/assessed
HRV-MBS-PS-VL1824-NGI--	pil-gsa17_18/assessed ane-gsa17_18/assessed
HRV-MBS-PS-VL2440-NGI--	pil-gsa17_18/assessed ane-gsa17_18/assessed
ITA-MBS-DRB-VL1218-NGI--	Striped venus-sa 17/no information
ITA-MBS-DTS-VL0612-NGI--	ctc-gsa17_18/assessed mts-gsa17_18/assessed mts-gsa17/assessed Caramote prawn-sa 9/no information hke-gsa12_13_14_15_16/assessed sol-gsa17/assessed mut-gsa17_18/assessed tgs-

	gsa17/assessed Big-scale sand smelt-sa 17/no information Common octopus-sa 16/no information Common octopus-sa 9/no information Surmullet-sa 16/no information Spottail mantis squillid-sa 9/no information mut-gsa09/assessed Common pandora-sa 16/no information Common cuttlefish-sa 16/no information European squid-sa 16/no information Common octopus-sa 18/no information dps-gsa12_13_14_15_16/assessed Smooth-hound-sa 17/no information Common two-banded seabream-sa 18/no information Common spiny lobster-sa 9/no information Common cuttlefish-sa 9/no information mut-gsa15_16/no information mut-gsa16/assessed Atlantic horse mackerel-sa 16/no information Spottail mantis squillid-sa 16/no information Musky octopus-sa 16/no information Marine crustaceans nei-sa 17/no information Bogue-sa 16/no information
ITA-MBS-DTS-VL1218-NGI--	ctc-gsa17_18/assessed nep-gsa17_18/assessed dps-gsa17_18_19/assessed mts-gsa17_18/assessed Horned octopus-sa 18/no information mts-gsa17/assessed mut-gsa17_18/assessed Blue and red shrimp-sa 19/no information dps-gsa09_10_11/assessed Common cuttlefish-sa 16/no information ars-gsa18_19/no information tgs-gsa17/assessed hke-gsa17_18/assessed hke-gsa17_18_stecf/assessed dps-gsa12_13_14_15_16/assessed European squid-sa 16/no information ars-gsa09_10_11/assessed European squid-sa 18/no information Gilthead seabream-sa 18/no information mut-gsa09/assessed nep-gsa09/assessed European squid-sa 9/no information Broadtail shortfin squid-sa 18/no information European squid-sa 17/no information Musky octopus-sa 17/no information hke-gsa09_10_11/assessed Caramote prawn-sa 18/no information hke-gsa19/assessed mur-gsa09/no information Whiting-sa 17/no information Musky octopus-sa 18/no information Horned octopus-sa 9/no information sol-gsa17/assessed Common octopus-sa 16/no information ara-gsa09/no information Broadtail shortfin squid-sa 17/no information Common octopus-sa 9/no information Blackbellied angler-sa 18/no information Surmullet-sa 11/no information ara-gsa09_10_11/assessed Atlantic mackerel-sa 17/no information Surmullet-sa 16/no information hke-gsa12_13_14_15_16/assessed Marine fishes nei-sa 17/no information Caramote prawn-sa 9/no information Musky octopus-sa 16/no information Norway lobster-sa 16/no information Common octopus-sa 11/no information Common cuttlefish-sa 9/no information Broadtail shortfin squid-sa 9/no information Norway lobster-sa 19/no information mut-gsa19/assessed Atlantic horse mackerel-sa 16/no information Common octopus-sa 10/no information mut-gsa10/assessed Midsize squid-sa 17/no information Giant red shrimp-sa 16/no information
ITA-MBS-DTS-VL1824-NGI--	dps-gsa12_13_14_15_16/assessed tgs-gsa17/assessed mut-gsa17_18/assessed nep-gsa17_18/assessed ars-gsa09_10_11/assessed dps-gsa17_18_19/assessed dps-gsa09_10_11/assessed hke-gsa17_18_stecf/assessed hke-gsa17_18/assessed ctc-gsa17_18/assessed Musky octopus-sa 17/no information mts-gsa17_18/assessed hke-gsa09_10_11/assessed ara-gsa09_10_11/assessed mut-gsa09/assessed mts-gsa17/assessed Broadtail shortfin squid-sa 17/no information ars-gsa18_19/no information Horned octopus-sa 9/no information nep-gsa09/assessed sol-gsa17/assessed Giant red shrimp-sa 16/no information Blackbellied angler-sa 17/no information Caramote prawn-sa 9/no information swo-med/assessed mur-gsa09/no information ane-gsa09_10_11/assessed hke-gsa12_13_14_15_16/assessed Norway lobster-sa 16/no information European squid-sa 9/no information Common octopus-sa 9/no information Whiting-sa 17/no information Blue and red shrimp-sa 19/no information Horned octopus-sa 18/no information Common cuttlefish-sa 9/no information mut-gsa10/assessed ara-gsa09/no information European squid-sa 17/no information hke-gsa09/no information Marine molluscs nei-sa 17/no information Common octopus-sa 16/no information Broadtail shortfin squid-sa 9/no information Common cuttlefish-sa 16/no information Atlantic mackerel-sa 17/no information Horned octopus-sa 17/no information Surmullet-sa 16/no information European squid-sa 11/no information Tub gurnard-sa 9/no information Tub gurnard-sa 17/no information Common cuttlefish-sa 10/no information Blackbellied angler-sa 18/no information Spottail mantis squillid-sa 9/no information Surmullet-sa 11/no information
ITA-MBS-DTS-VL2440-NGI--	Giant red shrimp-sa 16/no information dps-gsa12_13_14_15_16/assessed Blue and red shrimp-sa 16/no information Surmullet-sa 16/no information ara-gsa09_10_11/assessed Norway lobster-sa 16/no information ars-gsa09_10_11/assessed tgs-gsa17/assessed nep-gsa17_18/assessed hke-gsa17_18/assessed hke-gsa17_18_stecf/assessed mut-gsa17_18/assessed
ITA-MBS-HOK-VL1218-NGI--	swo-med/assessed bft-ea/no information alb-med/no information hke-gsa17_18/assessed hke-gsa17_18_stecf/assessed hke-gsa09_10_11/assessed Silver scabbardfish-sa 19/no information Silver scabbardfish-sa 10/no information
ITA-MBS-HOK-VL1824-NGI--	swo-med/assessed alb-med/no information bft-ea/no information
ITA-MBS-PGP-VL0006-NGI--	ctc-gsa17_18/assessed Gilthead seabream-sa 9/no information Mullets nei-sa 17/no information Common octopus-sa 11/no information Common octopus-sa 19/no information Common cuttlefish-sa 19/no information Common cuttlefish-sa 9/no information Common cuttlefish-sa 10/no information hke-gsa19/assessed Donax clams-sa 9/no information mts-gsa17_18/assessed Common octopus-sa 18/no information hke-gsa09_10_11/assessed Common octopus-sa 10/no information Common spiny lobster-sa 11/no information Blackbelly rosefish-sa 11/no information mut-gsa19/assessed Annular seabream-sa 19/no information Bogue-sa 10/no information Caramote prawn-sa 10/no information mts-gsa17/assessed Common cuttlefish-sa 16/no information Gobies nei-sa 11/no information Broadtail shortfin squid-sa 10/no information Stony sea urchin-sa 19/no

	information Mediterranean moray-sa 11/no information Thinlip grey mullet-sa 9/no information Common pandora-sa 10/no information mut-gsa10/assessed Greater amberjack-sa 10/no information mut-gsa17_18/assessed Common octopus-sa 9/no information Blackbelly rosefish-sa 10/no information Gilthead seabream-sa 11/no information Blackbelly rosefish-sa 19/no information Atlantic saury-sa 19/no information Sand steenbras-sa 10/no information Gilthead seabream-sa 10/no information Surmullet-sa 18/no information Common cuttlefish-sa 11/no information Annular seabream-sa 10/no information Wrasses, hogfishes, etc. nei-sa 10/no information hke-gsa12_13_14_15_16/assessed Common sole-sa 9/no information Bogue-sa 16/no information Gilthead seabream-sa 19/no information Common spiny lobster-sa 16/no information European seabass-sa 18/no information Common spiny lobster-sa 19/no information European squid-sa 10/no information White seabream-sa 18/no information Common spiny lobster-sa 10/no information sol-gsa17/assessed Saddled seabream-sa 10/no information Broadtail shortfin squid-sa 19/no information European seabass-sa 9/no information Surmullet-sa 10/no information Sand steenbras-sa 9/no information Pearly razorfish-sa 19/no information
ITA-MBS-PGP-VL0612-NGI--	ctc-gsa17_18/assessed hke-gsa09_10_11/assessed Common octopus-sa 11/no information Changeable nassa-sa 17/no information sol-gsa17/assessed Gilthead seabream-sa 17/no information Donax clams-sa 9/no information swo-med/assessed Common octopus-sa 18/no information hke-gsa19/assessed Gilthead seabream-sa 9/no information Common cuttlefish-sa 16/no information Common cuttlefish-sa 19/no information Common spiny lobster-sa 11/no information mts-gsa17_18/assessed Common cuttlefish-sa 9/no information Broadtail shortfin squid-sa 10/no information Common octopus-sa 10/no information Common cuttlefish-sa 10/no information European anchovy-sa 19/no information Common octopus-sa 9/no information Transparent goby-sa 10/no information Transparent goby-sa 9/no information Blackbelly rosefish-sa 11/no information Common octopus-sa 19/no information Common cuttlefish-sa 11/no information Big-scale sand smelt-sa 17/no information Silver scabbardfish-sa 10/no information European seabass-sa 17/no information mts-gsa17/assessed Surmullet-sa 16/no information Surmullet-sa 10/no information Common spiny lobster-sa 16/no information Mullets nei-sa 17/no information Greater amberjack-sa 19/no information Common pandora-sa 10/no information Frigate and bullet tunas-sa 10/no information Common spiny lobster-sa 19/no information mut-gsa19/assessed hke-gsa12_13_14_15_16/assessed Greater amberjack-sa 10/no information Picarel-sa 16/no information Common dolphinfish-sa 10/no information Marine crabs nei-sa 17/no information Sand steenbras-sa 17/no information Blackbelly rosefish-sa 19/no information ane-gsa09_10_11/assessed Atlantic bonito-sa 19/no information mur-gsa09/no information Common octopus-sa 16/no information Sand steenbras-sa 9/no information hke-gsa09/no information European seabass-sa 9/no information Wrasses, hogfishes, etc. nei-sa 16/no information Sand steenbras-sa 10/no information Little tunny(=Atl.black skipj)-sa 19/no information Bogue-sa 10/no information Mediterranean mussel-sa 17/no information Picarels nei-sa 10/no information Marine fishes nei-sa 17/no information Red porgy-sa 11/no information Common sole-sa 18/no information Atlantic bonito-sa 10/no information European pilchard(=Sardine)-sa 19/no information Blackbelly rosefish-sa 10/no information Blackbelly rosefish-sa 16/no information Surmullet-sa 11/no information Gobies nei-sa 17/no information hom-gsa09_10_11/assessed Wrasses, hogfishes, etc. nei-sa 10/no information Silver scabbardfish-sa 9/no information
ITA-MBS-PGP-VL1218-NGI--	swo-med/assessed Rudderfish-sa 9/no information bft-ea/no information Common spiny lobster-sa 11/no information Striped soldier shrimp-sa 17/no information hke-gsa09_10_11/assessed Silver scabbardfish-sa 9/no information Common octopus-sa 11/no information hke-gsa09/no information Striped soldier shrimp-sa 10/no information Transparent goby-sa 9/no information sol-gsa17/assessed Red porgy-sa 11/no information Common sole-sa 9/no information Smooth-hound-sa 17/no information Rudderfish-sa 11/no information Blackbelly rosefish-sa 11/no information ane-gsa09_10_11/assessed Black seabream-sa 11/no information Common cuttlefish-sa 19/no information Mediterranean mussel-sa 17/no information Common cuttlefish-sa 11/no information Common spiny lobster-sa 16/no information Changeable nassa-sa 17/no information Common spiny lobster-sa 9/no information
ITA-MBS-PGP-VL1824-NGI--	swo-med/assessed bft-ea/no information
ITA-MBS-PS-VL0612-NGI--	ane-gsa09_10_11/assessed European pilchard(=Sardine)-sa 10/no information Greater amberjack-sa 10/no information Picarel-sa 10/no information Picarels nei-sa 10/no information Atlantic bonito-sa 10/no information Frigate and bullet tunas-sa 10/no information VMA-sa 10/no information
ITA-MBS-PS-VL1218-NGI--	ane-gsa09_10_11/assessed European anchovy-sa 19/no information Frigate and bullet tunas-sa 16/no information Greater amberjack-sa 16/no information Round sardinella-sa 10/no information pil-gsa17_18/assessed ane-gsa17_18/assessed VMA-sa 10/no information Marine fishes nei-sa 19/no information European pilchard(=Sardine)-sa 10/no information Atlantic bonito-sa 10/no information Greater amberjack-sa 10/no information ane-gsa16/no information Greater amberjack-sa 9/no information
ITA-MBS-PS-VL1824-NGI--	ane-gsa09_10_11/assessed ane-gsa16/no information Greater amberjack-sa 10/no information Little tunny(=Atl.black skipj)-sa 10/no information

ITA-MBS-PS-VL2440-NGI--	ane-gsa17_18/assessed ane-gsa09_10_11/assessed bft-ea/no information
ITA-MBS-PS-VL40XX-NGI--	bft-ea/no information
ITA-MBS-TBB-VL1218-NGI--	sol-gsa17/assessed ctc-gsa17_18/assessed Great Mediterranean scallop-sa 17/no information Turbot-sa 17/no information Purple dye murex-sa 17/no information Marine molluscs nei-sa 17/no information
ITA-MBS-TBB-VL1824-NGI--	sol-gsa17/assessed ctc-gsa17_18/assessed Marine molluscs nei-sa 17/no information Turbot-sa 17/no information Purple dye murex-sa 17/no information tgs-gsa17/assessed
ITA-MBS-TBB-VL2440-NGI--	sol-gsa17/assessed ctc-gsa17_18/assessed Purple dye murex-sa 17/no information Turbot-sa 17/no information tgs-gsa17/assessed
ITA-MBS-TM-VL1218-NGI--	ane-gsa17_18/assessed pil-gsa17_18/assessed
ITA-MBS-TM-VL1824-NGI--	pil-gsa17_18/assessed ane-gsa17_18/assessed ane-gsa16/no information
ITA-MBS-TM-VL2440-NGI--	ane-gsa17_18/assessed pil-gsa17_18/assessed
MLT-MBS-DTS-VL2440-NGI--	Giant red shrimp-sa 15/no information Surmullet-sa 15/no information ars-gsa18_19/no information dps-gsa12_13_14_15_16/assessed Common cuttlefish-sa 15/no information hke-gsa12_13_14_15_16/assessed Blue and red shrimp-sa 15/no information mut-gsa15_16/no information mut-gsa15/assessed John dory-sa 15/no information
MLT-MBS-HOK-VL1218-NGI--	swo-med/assessed bft-ea/no information Common dolphinfish-sa 15/no information Red scorpionfish-sa 15/no information Red porgy-sa 15/no information
MLT-MBS-HOK-VL1824-NGI--	swo-med/assessed alb-med/no information
MLT-MBS-MGO-VL0612-NGI--	Common dolphinfish-sa 15/no information swo-med/assessed
MLT-MBS-MGO-VL1824-NGI--	Common dolphinfish-sa 15/no information swo-med/assessed bft-ea/no information
MLT-MBS-PGP-VL0006-NGI--	Common octopus-sa 15/no information Red scorpionfish-sa 15/no information European squid-sa 15/no information Axillary seabream-sa 15/no information Common dolphinfish-sa 15/no information Bogue-sa 15/no information Scorpionfishes, rockfishes nei-sa 15/no information White seabream-sa 15/no information Surmullet-sa 15/no information Common cuttlefish-sa 15/no information Red porgy-sa 15/no information
MLT-MBS-PGP-VL0612-NGI--	swo-med/assessed bft-ea/no information Silver scabbardfish-sa 15/no information Red porgy-sa 15/no information alb-med/no information Common dolphinfish-sa 15/no information
MLT-MBS-PMP-VL0006-NGI--	Common octopus-sa 15/no information Common dolphinfish-sa 15/no information Axillary seabream-sa 15/no information swo-med/assessed Common cuttlefish-sa 15/no information
MLT-MBS-PMP-VL0612-NGI--	Common dolphinfish-sa 15/no information Common octopus-sa 15/no information bft-ea/no information Red porgy-sa 15/no information swo-med/assessed Axillary seabream-sa 15/no information Red scorpionfish-sa 15/no information European squid-sa 15/no information Greater amberjack-sa 15/no information Surmullet-sa 15/no information
MLT-MBS-PS-VL1824-NGI--	Atlantic bluefin tuna-sa 14/no information Atlantic mackerel-sa 15/no information Chub mackerel-sa 15/no information
ROU-MBS-PG-VL0006-NGI--	rpw-gsa29/assessed Mediterranean mussel-sa 29/no information tur-gsa29/assessed
ROU-MBS-PG-VL0612-NGI--	tur-gsa29/assessed hmm-gsa29/assessed ane-gsa29/assessed
ROU-MBS-PMP-VL0612-NGI--	rpw-gsa29/assessed Mediterranean mussel-sa 29/no information
ROU-MBS-PMP-VL1218-NGI--	rpw-gsa29/assessed
ROU-MBS-PMP-VL1824-NGI--	rpw-gsa29/assessed
ROU-MBS-PMP-VL2440-NGI--	rpw-gsa29/assessed
SVN-MBS-DFN-VL0006-NGI-NA-	European seabass-sa 17/no information Gilthead seabream-sa 17/no information sol-gsa17/assessed Mullets nei-sa 17/no information Common pandora-sa 17/no information Annular seabream-sa 17/no information
SVN-MBS-DFN-VL0612-NGI-NA-	Gilthead seabream-sa 17/no information sol-gsa17/assessed Common pandora-sa 17/no information European seabass-sa 17/no information
SVN-MBS-DTS-VL1218-NGI-NA-	European squid-sa 17/no information Musky octopus-sa 17/no information Whiting-sa 17/no information mut-gsa17_18/assessed

For Area27 for fleets with sar >0

fleet_code	major_stocks
BEL-NAO-PMP-VL1824-NGI--	Great Atlantic scallop-27.7.d/no information sol.27.4/assessed
BEL-NAO-TBB-VL2440-NGI--	ple.27.420/assessed sol.27.7fg/assessed sol.27.7d/assessed sol.27.8ab/assessed sol.27.4/assessed ple.27.7d/assessed mon.27.78abd/assessed Common cuttlefish-27.7.e/no information cod.27.47d20/assessed lem.27.3a47d/no information tur.27.4/assessed bll.27.3a47de/no information Common cuttlefish-27.7.d/no information sol.27.7h-k/assessed
DEU-NAO-DFN-VL1218-NGI--	sol.27.4/assessed cod.27.47d20/assessed Common sole-27.3.a/no information
DEU-NAO-DFN-VL2440-NGI--	anf.27.3a46/no information Deep-sea red crab-27.6.b/no information Anglerfishes nei-27.7.c/no information sol.27.4/assessed cod.27.47d20/assessed
DEU-NAO-DTS-VL1012-NGI--	ple.27.24-32/no information cod.27.22-24/assessed ple.27.21-23/assessed her.27.20-24/assessed
DEU-NAO-DTS-VL1218-NGI--	ple.27.21-23/assessed cod.27.22-24/assessed her.27.20-24/assessed spr.27.22-32/assessed
DEU-NAO-DTS-VL1824-NGI--	ple.27.420/assessed nep.fu.8/assessed nep.fu.6/assessed tur.27.4/assessed ple.27.21-23/assessed cod.27.22-24/assessed nep.fu.5/no information ple.27.24-32/no information nep.fu.33/no information
DEU-NAO-DTS-VL2440-NGI--	pok.27.3a46/assessed cod.27.47d20/assessed hke.27.3a46-8abd/assessed ple.27.420/assessed had.27.46a20/assessed
DEU-NAO-DTS-VL40XX-NGI--	Greenland halibut-27.14.b/no information Atlantic cod-27.2.b/no information cod.27.1-2/assessed Atlantic cod-27.2.a/no information Greenland halibut-21.1.c/no information pok.27.3a46/assessed Atlantic cod-27.14.b/no information
DEU-NAO-PG-VL0010-NGI--	Pike-perch-27.3.d.24/no information cod.27.22-24/assessed her.27.20-24/assessed European perch-27.3.d.24/no information European eel-27.3.d.24/no information Roach-27.3.d.24/no information ple.27.21-23/assessed
DEU-NAO-PG-VL1012-NGI--	her.27.20-24/assessed cod.27.22-24/assessed ple.27.21-23/assessed
DEU-NAO-TBB-VL2440-NGI--	sol.27.4/assessed ple.27.420/assessed tur.27.4/assessed
DEU-NAO-TM-VL40XX-NGI--	mac.27.nea/assessed her.27.3a47d/assessed whb.27.1-91214/assessed her.27.1-24a514a/assessed pil_34.1.3_34.3.1/assessed Blue whiting(=Poutassou)-27.2.a/no information
DNK-NAO-DTS-VL1218-NGI--	nep.fu.3-4/assessed European plaice-27.3.a/no information cod.27.21/no information cod.27.22-24/assessed san.sa.3r/no information Common sole-27.3.a/no information her.27.20-24/assessed
DNK-NAO-DTS-VL1824-NGI--	nep.fu.3-4/assessed cod.27.21/no information European plaice-27.3.a/no information ple.27.420/assessed spr.27.4/no information pra.27.3a4a/assessed wit.27.3a47d/assessed anf.27.3a46/no information san.sa.1r/no information san.sa.3r/no information
DNK-NAO-DTS-VL2440-NGI--	cod.27.47d20/assessed pra.27.3a4a/assessed anf.27.3a46/no information ple.27.420/assessed pok.27.3a46/assessed hke.27.3a46-8abd/assessed nep.fu.3-4/assessed lem.27.3a47d/no information cod.27.21/no information
DNK-NAO-PGP-VL0010-NGI--	European plaice-27.3.a/no information cod.27.21/no information Lumpfish(=Lumpsucker)-27.3.a/no information Common sole-27.3.a/no information cod.27.22-24/assessed European lobster-27.4.b/no information cod.27.47d20/assessed European eel-27.3.c.22/no information European eel-27.3.d.24/no information European eel-27.3.b.23/no information European flat oyster-27.4.b/no information ple.27.420/assessed ple.27.21-23/assessed Lumpfish(=Lumpsucker)-27.4.b/no information European eel-27.3.a/no information sol.27.4/assessed Atlantic mackerel-27.3.a/no information fle.27.3a4/no information Edible crab-27.4.b/no information Common prawn-27.3.c.22/no information
DNK-NAO-PGP-VL1012-NGI--	cod.27.22-24/assessed European plaice-27.3.a/no information ple.27.21-23/assessed cod.27.21/no information Turbot-27.3.c.22/no information ple.27.420/assessed sal.27.22-31/no information sol.27.4/assessed Lumpfish(=Lumpsucker)-27.4.b/no information sol.27.20-24/assessed bll.27.22-32/no information
DNK-NAO-PMP-VL0010-NGI--	European plaice-27.3.a/no information cod.27.21/no information ple.27.21-23/assessed nep.fu.3-4/assessed cod.27.22-24/assessed Common sole-27.3.a/no information Lumpfish(=Lumpsucker)-27.3.a/no information pol.27.3a4/no information Turbot-27.3.c.22/no information ple.27.420/assessed
DNK-NAO-PMP-VL1012-NGI--	European plaice-27.3.a/no information ple.27.21-23/assessed Atlantic cod-27.3.d.25/no information

	nep.fu.3-4/assessed cod.27.21/no information cod.27.22-24/assessed ple.27.420/assessed lem.27.3a47d/no information Common sole-27.3.a/no information
DNK-NAO-PMP-VL1218-NGI--	nep.fu.3-4/assessed European plaice-27.3.a/no information cod.27.22-24/assessed cod.27.21/no information ple.27.420/assessed Atlantic cod-27.3.d.26/no information Atlantic cod-27.3.d.25/no information
DNK-NAO-PMP-VL1824-NGI--	ple.27.420/assessed hke.27.3a46-8abd/assessed cod.27.47d20/assessed sol.27.4/assessed anf.27.3a46/no information tur.27.4/assessed
DNK-NAO-TM-VL1218-NGI--	spr.27.4/no information spr.27.22-32/assessed san.sa.1r/no information san.sa.3r/no information her.27.20-24/assessed
ESP-NAO-DFN-VL1012-NGI-NO-	Spotless smooth-hound-27.9.a/no information Streamer bass-27.8.c/no information Taquilla clams-27.8.c/no information Threadsail filefish-27.9.a/no information Timucu-27.9.a/no information TNZ-27.9.a/no information Two-finned round herring-27.9.a/no information USY-27.8.c/no information SFH-27.9.a/no information Sevenstar flying squid-27.9.a/no information Seabasses nei-27.8.c/no information Scyliorhinus tokubee-27.9.a/no information Scotsman seabream-27.8.c/no information Rough scad-27.8.c/no information Rough leatherjackets-27.9.a/no information Rosefishes nei-27.8.c/no information Red velvetfish-27.9.a/no information Red drum-27.8.c/no information RDV-27.8.c/no information RDU-27.8.c/no information QUU-27.8.c/no information QSE-27.9.a/no information Precious corals nei-27.9.a/no information Port Jackson shark-27.8.c/no information Porgies-27.9.a/no information Porgies-27.8.c/no information PNA-27.8.c/no information Plunderfish-27.9.a/no information Pickhandle barracuda-27.8.c/no information Parona leatherjacket-27.8.c/no information Panama hake-27.9.a/no information Pacific sleeper shark-27.9.a/no information Pacific burrfish-27.9.a/no information OYM-27.9.a/no information Otophidium chickcharney-27.9.a/no information Ornate spiny lobster-27.8.c/no information OJB-27.9.a/no information New Zealand mussel-27.9.a/no information New Zealand mussel-27.8.c/no information MXG-27.9.a/no information MWX-27.8.c/no information MVC-27.9.a/no information Monocle breams-27.8.c/no information MKC-27.9.a/no information Meuschenia australis-27.9.a/no information LDE-27.9.a/no information JHX-27.9.a/no information JDE-27.8.c/no information JDA-27.8.c/no information Japanese nylon shrimp-27.9.a/no information Inimicus cuvieri-27.9.a/no information Indo-Pacific king mackerel-27.8.c/no information Hooktooth shark-27.8.c/no information HLE-27.9.a/no information Gulf grouper-27.9.a/no information Guinea shrimp-27.8.c/no information GTN-27.9.a/no information Grey smooth-hound-27.9.a/no information Goldstripe sardinella-27.8.c/no information Goldlined seabream-27.8.c/no information GMU-27.9.a/no information Glauert's anglerfish-27.8.c/no information GJE-27.9.a/no information Giant swimcrab-27.8.c/no information Giant catfish-27.9.a/no information GCO-27.9.a/no information FRE-27.8.c/no information Fluted giant clam-27.8.c/no information Flabellum cup corals nei-27.9.a/no information DVA-27.8.c/no information Dogfishes nei-27.8.c/no information Disc-fin squids nei-27.9.a/no information Dana swimcrab-27.9.a/no information CYS-27.9.a/no information Congiopodus peruvianus-27.9.a/no information Common silver-biddy-27.8.c/no information Common galatea clam-27.9.a/no information Comb shrimp-27.8.c/no information Cobia-27.9.a/no information Cero-27.8.c/no information Callinectes swimcrabs nei-27.9.a/no information California lizardfish-27.9.a/no information Cabinza grunt-27.8.c/no information Butter hamlet-27.8.c/no information Brushtooth lizardfish-27.9.a/no information Broadnose skate-27.9.a/no information Boeseman croaker-27.9.a/no information Boeseman croaker-27.8.c/no information Blue and gold fusilier-27.8.c/no information BLS-27.8.c/no information Blood-stained turbo-27.8.c/no information Black stone crab-27.8.c/no information Blackspotted catshark-27.9.a/no information Blackspot skate-27.8.c/no information Black seabass-27.9.a/no information Black seabass-27.8.c/no information Belanger's croaker-27.9.a/no information Belanger's croaker-27.8.c/no information Barndoor skate-27.9.a/no information Ayu sweetfish-27.9.a/no information Atlantic surf clam-27.9.a/no information Atlantic searobins-27.9.a/no information Atlantic searobins-27.8.c/no information Atlantic seabasses-27.8.c/no information Atlantic sabretooth anchovy-27.9.a/no information Atlantic bay scallop-27.8.c/no information American shad-27.9.a/no information American shad-27.8.c/no information American sea scallop-27.9.a/no information White barbel-27.8.c/no information Yellowtip halfbeak-27.8.c/no information Winter flounder-27.8.c/no information Whitespotted smooth-hound-27.9.a/no information White mullet-27.9.a/no information Shads nei-27.8.c/no information Shortbelly eel-27.8.c/no information Slender bullseye-27.9.a/no information South Australian cobbler-27.8.c/no information South Australian cobbler-27.9.a/no information YFG-27.9.a/no information YFK-27.9.a/no information YKG-27.9.a/no information White croaker-27.9.a/no information Allen's tubelip-27.8.c/no information Spadenose shark-27.8.c/no information
ESP-NAO-DFN-VL1218-NGI-NO-	USO-27.8.c/no information MYA-27.9.a/no information Mutton snapper-27.8.c/no information Mullet snapper-27.9.a/no information Mountain mullet-27.9.a/no information Monocle breams-27.9.a/no information Mojarras(=Silver-biddies) nei-27.8.c/no information MKC-27.9.a/no information MEI-27.8.c/no information McCain's skate-27.8.c/no information LPW-27.8.c/no information LPE-27.9.a/no information Longtail skate-27.8.c/no information Longfin trevally-27.9.a/no information Longfin squid-27.9.a/no information Longfin mullet-27.9.a/no information Leaping bonito-27.8.c/no information Largescale flounder-27.9.a/no information Lancer stargazer-

27.9.a/no information Lake sturgeon-27.8.c/no information Kolibri shrimp-27.8.c/no information King crab-27.9.a/no information King crab-27.8.c/no information Karanteen seabream-27.9.a/no information JRT-27.8.c/no information JRA-27.9.a/no information JBI-27.9.a/no information Japanese scad-27.9.a/no information January octopus-27.8.c/no information Intermediate scabbardfish-27.8.c/no information Indo-Pacific king mackerel-27.9.a/no information Indo-Pacific king mackerel-27.8.c/no information ICI-27.8.c/no information Horse mussels nei-27.8.c/no information Hapuku wreckfish-27.8.c/no information Gurgesiella atlantica-27.9.a/no information Gulf herring-27.8.c/no information Guinea shrimp-27.9.a/no information Guinea shrimp-27.8.c/no information Guinean barracuda-27.9.a/no information Greeneyes-27.9.a/no information Goldlined seabream-27.8.c/no information Goatfishes-27.9.a/no information Goatfishes-27.8.c/no information GNS-27.8.c/no information Glassy flying squid-27.8.c/no information Giant swimcrab-27.9.a/no information Giant keyhole sand dollar-27.8.c/no information GHG-27.9.a/no information GFG-27.9.a/no information Geelbek croaker-27.8.c/no information GAZ-27.9.a/no information Gay's little venus-27.9.a/no information Gay's little venus-27.8.c/no information Gavialiceps taeniola-27.9.a/no information Gasterosteus crenobiontus-27.8.c/no information Garnet coral-27.9.a/no information FRC-27.8.c/no information FBA-27.8.c/no information English sole-27.9.a/no information Emperor red snapper-27.9.a/no information Emperor red snapper-27.8.c/no information EJU-27.8.c/no information Eaton's skate-27.8.c/no information DUH-27.8.c/no information Dombey's tagelus-27.9.a/no information Dolly varden-27.9.a/no information Dogfishes nei-27.9.a/no information Dogfishes nei-27.8.c/no information Dictyosoma burgeri-27.8.c/no information Deep-water mud lobster-27.8.c/no information Deep-sea smelt-27.9.a/no information Corsula-27.8.c/no information Coral catshark-27.9.a/no information Coral catshark-27.8.c/no information Coral catshark-27.8.b/no information Coney-27.8.c/no information Common snook-27.9.a/no information Common silver-biddy-27.9.a/no information Common silver-biddy-27.8.c/no information Comb shrimp-27.9.a/no information Comb shrimp-27.8.c/no information Collichthys lucidus-27.9.a/no information Cobia-27.9.a/no information Cloudy catshark-27.8.c/no information Chilean sea urchin-27.9.a/no information CFL-27.9.a/no information Cero-27.9.a/no information CCA-27.8.c/no information Castaneta-27.9.a/no information Cassava croaker-27.9.a/no information Caribbean reef octopus-27.8.c/no information Carcharhinus sharks nei-27.8.c/no information Cape rock lobster-27.8.c/no information Cape lobster-27.8.c/no information Callinectes swimcrabs nei-27.9.a/no information Calico scallop-27.9.a/no information Calico scallop-27.8.c/no information BYR-27.8.c/no information BSL-27.8.c/no information Broadnose catshark-27.8.c/no information Brazilian sardinella-27.9.a/no information Brazilian menhaden-27.9.a/no information Bothrocara alalongum-27.8.c/no information Boeseman croaker-27.9.a/no information Boeseman croaker-27.8.c/no information BMO-27.9.a/no information Blacktip reef shark-27.9.a/no information Blachea xenobranchialis-27.9.a/no information Bilabria ornata-27.8.c/no information Biglip grunt-27.9.a/no information Bighead carp-27.8.c/no information Bigeyes nei-27.8.c/no information BHZ-27.8.c/no information Barred grunt-27.9.a/no information BAA-27.8.c/no information Australian grayling-27.9.a/no information Australian bonito-27.8.c/no information Atlantic silverside-27.8.c/no information Atlantic searobins-27.9.a/no information Atlantic searobins-27.8.c/no information Atlantic seabob-27.9.a/no information Atlantic seabasses-27.9.a/no information ASP-27.8.c/no information Arrow blenny-27.9.a/no information Argentine croaker-27.9.a/no information Argentine croaker-27.8.c/no information AOR-27.9.a/no information AMG-27.9.a/no information American shad-27.9.a/no information American shad-27.8.c/no information American sea scallop-27.8.c/no information Alaska plaice-27.8.c/no information Alabama shad-27.9.a/no information AJS-27.8.c/no information AGG-27.9.a/no information Mystriophis porphyreus-27.9.a/no information Nansenia ardesiaca-27.8.c/no information NKG-27.9.a/no information Northern red snapper-27.9.a/no information Northern smoothtounge-27.9.a/no information Oarfishes nei-27.9.a/no information ORE-27.9.a/no information Other-27.8.c/no information OVA-27.8.c/no information Pacific burrfish-27.9.a/no information Pacific ladyfish-27.8.c/no information Pacific ladyfish-27.9.a/no information Pacific scabbardfish-27.8.c/no information Panama hake-27.9.a/no information Panama spadefish-27.8.c/no information Panatella silverside-27.9.a/no information Patagonian skate-27.8.c/no information Peruvian rock seabass-27.8.c/no information Peruvian rock seabass-27.9.a/no information Picarels, etc. nei-27.8.c/no information Pickhandle barracuda-27.8.c/no information QOI-27.9.a/no information Queen conch-27.8.c/no information Rainbow smelt-27.9.a/no information Raja macrocauda-27.8.c/no information Red king crab-27.8.c/no information Red rock lobster-27.9.a/no information Rock grouper-27.9.a/no information Rosefishes nei-27.8.c/no information Rosefishes nei-27.9.a/no information Rough scad-27.8.c/no information SAJ-27.9.a/no information Sand flounders nei-27.8.c/no information Seabasses nei-27.8.c/no information Seabasses nei-27.9.a/no information Serra Spanish mackerel-27.8.c/no information Serra Spanish mackerel-27.9.a/no information Sevenstar flying squid-27.8.c/no information Shortjaw leatherjacket-27.8.c/no information Shortraker rockfish-27.9.a/no information Shorttail skate-27.9.a/no information Silver croaker-27.8.c/no information Silver seabream-27.8.c/no information Silver whiptail-27.9.a/no information Slantlip eel-27.9.a/no information Slender grouper-27.8.c/no information Slender grouper-27.9.a/no information Small toothed jobfish-27.9.a/no information Smalltooth emperor-27.8.c/no information Smooth nylon shrimp-27.9.a/no information Softshell red crab-27.8.c/no information South Australian cobbler-27.9.a/no information Southern spider crab-27.8.c/no information Southern spider crab-27.9.a/no information Spear lobsters nei-27.8.c/no information Spotfin frogfish-27.8.c/no information Spotless smooth-

	hound-27.8.c/no information Spotless smooth-hound-27.9.a/no information Spottail seabream-27.8.c/no information Spotty bobtail squid-27.8.c/no information Stout squat lobster-27.9.a/no information Striate limpet-27.8.c/no information Striped bonito-27.8.c/no information SVV-27.8.c/no information Tade gray mullet-27.8.c/no information Tench-27.9.a/no information TEO-27.9.a/no information TOY-27.9.a/no information TTW-27.9.a/no information Tudor's flounder-27.9.a/no information TUP-27.9.a/no information Twobar seabream-27.8.c/no information Twobar seabream-27.9.a/no information Two-finned round herring-27.8.c/no information Two-finned round herring-27.9.a/no information TZP-27.9.a/no information Warthead blenny-27.8.c/no information West coast seabream-27.8.c/no information White croaker-27.9.a/no information Windowpane flounder-27.8.c/no information Windowpane flounder-27.9.a/no information Yellowbelly rockcod-27.8.c/no information Yellow snapper-27.8.c/no information YFL-27.9.a/no information AAL-27.9.a/no information African forktail snapper-27.8.c/no information African forktail snapper-27.9.a/no information African mud s
ESP-NAO-DTS-VL1218-NGI-NO-	Spotted eagle ray-27.9.a/no information Striped bonito-27.9.a/no information SUS-27.9.a/no information SUU-27.9.a/no information Swamp ghost crab-27.9.a/no information Timucu-27.9.a/no information Trumpeters nei-27.9.a/no information TTW-27.9.a/no information Tuskfishes nei-27.9.a/no information Twobar seabream-27.9.a/no information Weakfishes nei-27.9.a/no information West coast seabream-27.9.a/no information Windowpane flounder-27.9.a/no information XOX-27.9.a/no information ZSP-27.9.a/no information Shortfin scad-27.9.a/no information Sharptooth smooth-hound-27.9.a/no information Seabasses nei-27.9.a/no information Sandbird octopus-27.9.a/no information Rough turbo-27.9.a/no information Roughtail catshark-27.9.a/no information Red delesseria-27.9.a/no information Red codling-27.9.a/no information Razor mud shrimp-27.9.a/no information PZO-27.9.a/no information Pomfrets, ocean breams nei-27.9.a/no information PNV-27.9.a/no information Plicate conch-27.9.a/no information Pike icefish-27.9.a/no information Pickhandle barracuda-27.9.a/no information Peruvian rock seabass-27.9.a/no information Peacock hind-27.9.a/no information Panga seabream-27.9.a/no information Pacific sleeper shark-27.9.a/no information Pacific pompano-27.9.a/no information Orange-lined triggerfish-27.9.a/no information NXC-27.9.a/no information Nurse shark-27.9.a/no information Northern white shrimp-27.9.a/no information Northern red snapper-27.9.a/no information Northern quahog(=Hard clam)-27.9.a/no information Flat needlefish-27.9.a/no information EFZ-27.9.a/no information EFY-27.9.a/no information ECN-27.9.a/no information DUH-27.9.a/no information DTF-27.9.a/no information Deep-water mud lobster-27.9.a/no information Dana viperfish-27.9.a/no information Daggernose shark-27.9.a/no information Daggerhead breams nei-27.9.a/no information Cross tellin-27.9.a/no information Coral catshark-27.9.a/no information Common silver-biddy-27.9.a/no information Common arm squid-27.9.a/no information Cholga mussel-27.9.a/no information Castaneta-27.9.a/no information Carcharhinus sharks nei-27.9.a/no information Cape rock lobster-27.9.a/no information Cape lobster-27.9.a/no information Callinectes swimcrabs nei-27.9.a/no information Cabezon-27.9.a/no information Burmeister's porpoise-27.9.a/no information Broomtail grouper-27.9.a/no information Broadfin sawtail catshark-27.9.a/no information Brightbelly sculpin-27.9.a/no information BNQ-27.9.a/no information Blue squat lobster-27.9.a/no information Blue mackerel-27.9.a/no information BLK-27.9.a/no information Black musselcracker-27.9.a/no information Blackbar hogfish-27.9.a/no information Blackfin goosefish-27.9.a/no information Biglip grunt-27.9.a/no information Barred grunt-27.9.a/no information Argentine menhaden-27.9.a/no information AMJ-27.9.a/no information AJS-27.9.a/no information African forktail snapper-27.9.a/no information Adriatic trout-27.9.a/no information Aconcagua grenadier-27.9.a/no information Mud mantis-27.9.a/no information MQR-27.9.a/no information Mountain mullet-27.9.a/no information Mojarras(=Silver-biddies) nei-27.9.a/no information MKC-27.9.a/no information MIQ-27.9.a/no information Menhadens nei-27.9.a/no information McCain's skate-27.9.a/no information Maputo conger-27.9.a/no information MAO-27.9.a/no information LQJ-27.9.a/no information Longfin squid-27.9.a/no information LOA-27.9.a/no information Lizard mantis-27.9.a/no information LCD-27.9.a/no information Largescale flounder-27.9.a/no information King crab-27.9.a/no information KEA-27.9.a/no information January octopus-27.9.a/no information Indian red shrimp-27.9.a/no information ICI-27.9.a/no information Horned murex-27.9.a/no information HJX-27.9.a/no information Havana box crab-27.9.a/no information Harbour spidercrab-27.9.a/no information Gulf herring-27.9.a/no information Goatfishes-27.9.a/no information Geelbek croaker-27.9.a/no information GEC-27.9.a/no information GDJ-27.9.a/no information Gavialiceps taeniola-27.9.a/no information Freckled driftfish-27.9.a/no information FPJ-27.9.a/no information Silver croaker-27.9.a/no information Silver seabream-27.9.a/no information Slender grouper-27.9.a/no information Slender silver-biddy-27.9.a/no information Smallfin gulper shark-27.9.a/no information SNG-27.9.a/no information Snipefishes nei-27.9.a/no information Sockeye(=Red) salmon-27.9.a/no information Southern spider crab-27.9.a/no information Speckled shrimp-27.9.a/no information Spiny slipper shell-27.9.a/no information Spiny turbots nei-27.9.a/no information
ESP-NAO-DTS-VL1824-NGI-NO-	Arabian red shrimp-27.9.a/no information YLP-27.9.a/no information Yellowspotted skate-27.9.a/no information XOX-27.9.a/no information Windowpane flounder-27.9.a/no information White croaker-27.9.a/no information West coast seabream-27.9.a/no information West African croakers nei-27.9.a/no information Weakfishes nei-27.9.a/no information WEA-27.9.a/no information UTV-27.9.a/no information ULI-27.9.a/no information Twobar seabream-27.9.a/no information Tudor's

flounder-27.9.a/no information TTW-27.9.a/no information Trumpeters nei-27.9.a/no information Toadfishes nei-27.9.a/no information Thumbstall squids nei-27.9.a/no information SYN-27.9.a/no information Swordtip squid-27.9.a/no information Striped escolar-27.9.a/no information Spotted eagle ray-27.9.a/no information Spotted dolphins nei-27.9.a/no information Spotless smooth-hound-27.9.a/no information Spiny turbots nei-27.9.a/no information Spiny slipper shell-27.9.a/no information Spadefishes nei-27.9.a/no information Southern spider crab-27.9.a/no information Southeast Atlantic soles nei-27.9.a/no information South Australian cobbler-27.9.a/no information Solenocerid shrimps nei-27.9.a/no information Snipefishes nei-27.9.a/no information Smooth red shrimp-27.9.a/no information Smooth nylon shrimp-27.9.a/no information Small toothed jobfish-27.9.a/no information Slender grouper-27.9.a/no information Silver seabream-27.9.a/no information Silver croaker-27.9.a/no information Sharptooth smooth-hound-27.9.a/no information Sharpnose sharks nei-27.9.a/no information Seventyfour seabream-27.9.a/no information Sevenstar flying squid-27.9.a/no information Seabasses nei-27.9.a/no information Sandbird octopus-27.9.a/no information Rough turbo-27.9.a/no information Rock violet-27.9.a/no information Redmouth grouper-27.9.a/no information Red king crab-27.9.a/no information Red codling-27.9.a/no information Red abalone-27.9.a/no information Randall's threadfin bream-27.9.a/no information Raja macrocauda-27.9.a/no information QZE-27.9.a/no information QOJ-27.9.a/no information PZO-27.9.a/no information Purplehead gamba prawn-27.9.a/no information Puffers nei-27.9.a/no information Psammobatis sand skates nei-27.9.a/no information Pickhandle barracuda-27.9.a/no information Peruvian rock seabass-27.9.a/no information Peacock hind-27.9.a/no information Painted sweetlips-27.9.a/no information Painted spiny lobster-27.9.a/no information Pacific seabobs-27.9.a/no information Pacific scabbardfish-27.9.a/no information Pacific pompano-27.9.a/no information Ornate spiny lobster-27.9.a/no information Olive grouper-27.9.a/no information Oil-vessel triton-27.9.a/no information OIB-27.9.a/no information NXC-27.9.a/no information Nurse shark-27.9.a/no information Nototodarus flying squids nei-27.9.a/no information Northern brown shrimp-27.9.a/no information NLJ-27.9.a/no information New Zealand lobster-27.9.a/no information Needle dogfish-27.9.a/no information Muksun-27.9.a/no information MUJ-27.9.a/no information Mountain mullet-27.9.a/no information Mojarras(=Silver-biddies) nei-27.9.a/no information MNU-27.9.a/no information Metanephrops lobsters nei-27.9.a/no information Meagres nei-27.9.a/no information McCain's skate-27.9.a/no information Maroon stone crab-27.9.a/no information Longfin squid-27.9.a/no information Lizard mantis-27.9.a/no information Largescale flounder-27.9.a/no information Largescale fat snook-27.9.a/no information Lantern fish-27.9.a/no information Kolibri shrimp-27.9.a/no information King weakfish-27.9.a/no information King soldier bream-27.9.a/no information Kicking mantis shrimp-27.9.a/no information KEA-27.9.a/no information Karanteen seabream-27.9.a/no information Juan Fernandez trevally-27.9.a/no information JBI-27.9.a/no information Japanese sand shrimp-27.9.a/no information January octopus-27.9.a/no information Indo-Pacific slender worm-eel-27.9.a/no information Indian red shrimp-27.9.a/no information ILB-27.9.a/no information ICI-27.9.a/no information Humming-bird bobtail squid-27.9.a/no information HTZ-27.9.a/no information HQT-27.9.a/no information Horned murex-27.9.a/no information Hooktooth dogfish-27.9.a/no information Havana box crab-27.9.a/no information Harbour spidercrab-27.9.a/no information Hapuku wreckfish-27.9.a/no information Hair crab-27.9.a/no information GTV-27.9.a/no information Goldlined seabream-27.9.a/no information Goatfishes-27.9.a/no information Glassy flying squid-27.9.a/no information Geelbek croaker-27.9.a/no information Gecko catshark-27.9.a/no information GDJ-27.9.a/no information FPJ-27.9.a/no information Flat needlefish-27.9.a/no information FHC-27.9.a/no information EGY-27.9.a/no information EGM-27.9.a/no information EFZ-27.9.a/no information ECN-27.9.a/no information DXQ-27.9.a/no information DUH-27.9.a/no information DTF-27.9.a/no information Doublethread grenadier-27.9.a/no information Dogtooth herring-27.9.a/no information DMK-27.9.a/no information Disc-fin squids nei-27.9.a/no information Deep-water mud lobster-27.9.a/no information Deania dogfishes nei-27.9.a/no information Dana octopus-27.9.a/no information Daggernose shark-27.9.a/no information Daggerhead breams nei-27.9.a/no information CWA-27.9.a/no information Coregonus nilssoni-27.9.a/no information Coral catshark-27.9.a/no information Common silver-biddy-27.9.a/no information Circular sea bisquit-27.9.a/no information CIK-27.9.a/no information Cheilodipterus alleni-27.9.a/no information CCA-27.9.a/no information Castaneta-27.9.a/no information Caribbean spiny lobster-27.9.a/no information Cardinalfishes, etc. nei-27.9.a/no information Carcharhinus sharks nei-27.9.a/no information Cape lobster-27.9.a/no information Callinectes swimcrabs nei-27.9.a/no information BYR-27.9.a/no information BWN-27.9.a/no information BUC-27.9.a/no information Brown king crab-27.9.a/no information Broadfin sawtail catshark-27.9.a/no information Brightbelly sculpin-27.9.a/no information Brazilian groupers nei-27.9.a/no information Brama spp-27.9.a/no information Bocaccio rockfish-27.9.a/no information Bobo mullet-27.9.a/no information Blue squat lobster-27.9.a/no information Blue mackerel-27.9.a/no information Blacksaddle herring-27.9.a/no information Blackbar hogfish-27.9.a/no information Bigscale anchovy-27.9.a/no information Bigeyes nei-27.9.a/no information Bellybutton nautilus-27.9.a/no information BDF-27.9.a/no information BAW-27.9.a/no information Batwing coral crab-27.9.a/no information Barred grunt-27.9.a/no information AVA-27.9.a/no information Atlantic seabob-27.9.a/no information Atlantic sawtail catshark-27.9.a/no information Atlantic bumper-27.9.a/no information Aristeus shrimps nei-27.9.a/no information Argobuccinum argus-27.9.a/no information Argentine croaker-27.9.a/no information Arctic flounder-27.9.a/no information AOC-27.9.a/no information American shad-27.9.a/no information Alaska plaice-

	27.9.a/no information Akiami paste shrimp-27.9.a/no information AJS-27.9.a/no information African forktail snapper-27.9.a/no information ACA-27.9.a/no information
ESP-NAO-DTS-VL2440-NGI-NO-	Castaneta-27.9.a/no information Giant sea cucumber-27.8.d.2/no information Giant sea cucumber-27.8.c/no information Giant sea cucumber-27.7.c.2/no information Geelbek croaker-27.9.a/no information EFZ-27.9.a/no information DUH-27.9.a/no information DKU-27.8.c/no information DKT-27.8.c/no information Deep-water mud lobster-27.9.a/no information Daggerhead breams nei-27.9.a/no information Daggerhead breams nei-27.8.c/no information Coral catshark-27.9.a/no information Coral catshark-27.8.c/no information Carcharhinus sharks nei-27.8.c/no information Cape lobster-27.9.a/no information Canary moray-27.8.a/no information Brazilian flathead-27.8.c/no information Brama spp-27.8.c/no information Blue squat lobster-27.9.a/no information Blue mackerel-27.8.c/no information Black pomfret-27.9.a/no information Blackmouth croaker-27.9.a/no information Bentnose macoma-27.8.c/no information BAY-27.9.a/no information Atlantic sawtail catshark-27.9.a/no information Atlantic sawtail catshark-27.8.c/no information Aristeus shrimps nei-27.9.a/no information Argentine croaker-27.9.a/no information Alewife-27.9.a/no information Alaska shrimp-27.9.a/no information Akiami paste shrimp-27.9.a/no information AJS-27.9.a/no information African forktail snapper-27.8.c/no information African forktail snapper-27.8.a/no information Yellow goatfish-27.9.a/no information YYC-27.8.c/no information Rough turbo-27.8.a/no information Rock grouper-27.8.c/no information Rhinoceros leatherjacket-27.9.a/no information Rhinoceros leatherjacket-27.8.c/no information Red stumpnose seabream-27.9.a/no information Red codling-27.9.a/no information Razorback scabbardfish-27.8.c/no information Raja macrocauda-27.8.c/no information Raja macrocauda-27.6.a/no information PZO-27.9.a/no information Porgies-27.8.c/no information Pomfrets, ocean breams nei-27.8.c/no information Peruvian rock seabass-27.9.a/no information Peacock hind-27.9.a/no information Pacific scabbardfish-27.9.a/no information Opalescent inshore squid-27.8.c/no information NXC-27.9.a/no information Northern cods nei-27.8.a/no information Northern brown shrimp-27.9.a/no information Needle dogfish-27.9.a/no information McCain's skate-27.9.a/no information Mangrove red snapper-27.8.c/no information Malabar sprat-27.9.a/no information Longfin squid-27.9.a/no information Lizard mantis-27.9.a/no information Largescale flounder-27.9.a/no information Largescale fat snook-27.9.a/no information Jumbo flying squid-27.8.c/no information Japanese sand shrimp-27.9.a/no information Intermediate scabbardfish-27.8.c/no information Indo-Pacific king mackerel-27.9.a/no information ICI-27.8.c/no information Horned murex-27.9.a/no information Harbour spidercrab-27.9.a/no information Goldlined seabream-27.8.c/no information Sao Paulo shrimp-27.9.a/no information Seabasses nei-27.8.c/no information Seabasses nei-27.9.a/no information Sevenstar flying squid-27.9.a/no information Silver seabream-27.9.a/no information Slender grouper-27.8.a/no information Southern spider crab-27.9.a/no information Spiny turbots nei-27.9.a/no information Spotted eagle ray-27.9.a/no information Striped escolar-27.8.c/no information Swordtip squid-27.9.a/no information Trumpeters nei-27.9.a/no information TTW-27.9.a/no information Twobar seabream-27.9.a/no information Two-finned round herring-27.8.c/no information Warsaw grouper-27.8.c/no information Warsaw grouper-27.9.a/no information West coast seabream-27.9.a/no information Whitespotted guitarfish-27.9.a/no information Windowpane flounder-27.8.c/no information Windowpane flounder-27.9.a/no information XOX-27.8.c/no information Goatfishes-27.9.a/no information Goatfishes-27.8.c/no information Glow-bellies, splitfins nei-27.8.c/no information Glassy flying squid-27.9.a/no information
ESP-NAO-DTS-VL40XX-NGI-NO-	cod.27.1-2/assessed Greenland halibut-21.3.l/no information Greenland halibut-21.3.m/no information Greenland halibut-21.3.n/no information Atlantic redfishes nei-21.3.m/no information reb.27.1-2/no information Atlantic redfishes nei-21.3.o/no information Raja rays nei-21.3.n/no information
ESP-NAO-FPO-VL1218-IC-NO-	TPD-34.1.2/no information Spanish hogfish-34.1.2/no information Sixbar grouper-34.1.2/no information Shoulderblade coral-34.1.2/no information Rough scad-34.1.2/no information PVD-34.1.2/no information Porgies-34.1.2/no information Oarfishes nei-34.1.2/no information Monopenchelys acuta-34.1.2/no information MMD-34.1.2/no information DGC-34.1.2/no information Barbeled plunderfishes nei-34.1.2/no information Tubenose poacher-34.1.2/no information UCO-34.1.2/no information
ESP-NAO-HOK-VL1218-NGI-NO-	Carcharhinus sharks nei-27.8.c/no information Seabasses nei-27.9.a/no information Silver croaker-27.8.c/no information Silver gemfish-27.8.c/no information Silver pomfrets nei-27.9.a/no information Silver pomfrets nei-34.1.1.1/no information TIX-27.8.c/no information TNF-27.9.a/no information Trident cuttlefish-27.8.c/no information Twobar seabream-27.8.c/no information Twobar seabream-27.9.a/no information Two-finned round herring-27.8.c/no information VER-27.8.c/no information West African croakers nei-27.8.c/no information Windowpane flounder-27.8.c/no information Windowpane flounder-27.9.a/no information WSW-27.9.a/no information African forktail snapper-27.8.c/no information AGG-27.9.a/no information Atlantic sawtail catshark-27.8.b/no information Atlantic sawtail catshark-27.8.c/no information Australian sawtail catshark-27.9.a/no information Bathyraja diplotaenia-27.8.c/no information Blue mackerel-27.8.c/no information Blueskin seabream-27.9.a/no information Brama spp-27.8.b/no information Brama spp-27.8.c/no information Brama spp-34.1.3.2/no information Brazilian flathead-27.8.c/no information Butterfishes nei-34.1.1.1/no information Cape lobster-27.9.a/no information Carcharhinus sharks

	nei-27.8.b/no information Carcharhinus sharks nei-27.9.a/no information Caribbean spiny lobster-27.8.c/no information Comb shrimp-27.8.c/no information DKU-27.8.c/no information Dogfishes nei-27.8.c/no information EGM-27.8.c/no information Falkland sprat-27.8.c/no information Flat needlefish-27.8.c/no information Gabon gurnard-27.9.a/no information Geelbek croaker-27.8.c/no information Giant boarfish-27.8.c/no information Giant keyhole sand dollar-27.8.c/no information Goatfishes-27.9.a/no information Guitarfishes nei-27.8.c/no information ICI-27.8.c/no information Intermediate scabbardfish-27.8.c/no information January octopus-27.8.c/no information Jumbo flying squid-27.8.c/no information KZS-27.8.c/no information Lake(=Common) whitefish-27.8.c/no information Lake(=Common) whitefish-27.9.a/no information Largescale flounder-27.8.c/no information Lavender jobfish-27.8.c/no information Longfin squid-27.8.c/no information McCain's skate-27.9.a/no information Mojarras(=Silver-biddies) nei-27.8.c/no information Murray's skate-27.8.c/no information Needle cuttlefish-27.8.c/no information OQU-27.8.c/no information Other-27.8.b/no information Pacific pompano-27.8.b/no information Pacific pompano-27.8.c/no information Panama ghost catshark-27.8.c/no information Peruvian rock seabass-27.8.c/no information Red codling-27.8.c/no information Red codling-27.9.a/no information Red codling-34.1.1.1/no information Red codling-sa 3/no information Red crab-27.8.c/no information Rock grouper-34.1.1.1/no information Scaled sardines-27.8.b/no information Seabasses nei-27.8.c/no information
ESP-NAO-HOK-VL1824-NGI-LLD-	Swordfish-27.9.b.1/no information Blue shark-27.8.b/no information Blue shark-27.8.c/no information swo-na/assessed Swordfish-27.10.a.1/no information Blue shark-27.8.a/no information Albacore-27.8.d.2/no information Swordfish-27.10.a.2/no information Blue shark-27.9.b.1/no information Swordfish-27.9.b.2/no information Swordfish-sa 4/no information
ESP-NAO-HOK-VL1824-NGI-NO-	Seabasses nei-27.8.c/no information Intermediate scabbardfish-27.8.c/no information Dogfishes nei-27.8.c/no information Sheepshead-27.9.a/no information SIE-27.8.c/no information Twobar seabream-27.8.c/no information Brama spp-27.8.c/no information Sheepshead-27.8.c/no information Seabasses nei-27.9.a/no information DKT-27.8.c/no information Black grouper-27.8.c/no information Atlantic sawtail catshark-27.8.c/no information Atlantic butterfish-27.8.c/no information African forktail snapper-27.9.a/no information African forktail snapper-27.8.c/no information
ESP-NAO-HOK-VL2440-NGI-LLD-	swo-na/assessed Swordfish-27.10.a.1/no information Blue shark-27.10.a.1/no information Blue shark-34.2/no information Blue shark-21.3.m/no information Blue shark-21.6.h/no information Blue shark-21.3.n/no information Blue shark-27.7.h/no information Swordfish-27.10.a.2/no information Blue shark-27.10.b/no information Blue shark-31/no information Blue shark-21.4.v.s/no information
ESP-NAO-PGP-VL2440-NGI-NO-	Seabasses nei-27.8.b/no information DKU-27.8.a/no information
ESP-NAO-PMP-VL0010-IC-NO-	Parrotfish-34.1.2/no information Skipjack tuna-34.1.2/no information Pink dentex-34.1.2/no information Red porgy-34.1.2/no information bft-ea/no information Splendid alfonsino-34.1.2/no information White trevally-34.1.2/no information Narwal shrimp-34.1.2/no information alb-na/no information vma-34/assessed Grey triggerfish-34.1.2/no information Dusky grouper-34.1.2/no information yft-atl/assessed Wahoo-34.1.2/no information European pilchard(=Sardine)-34.1.2/no information bet-atl/assessed Striped soldier shrimp-34.1.2/no information Common octopus-34.1.2/no information European hake-34.1.2/no information Planehead filefish-34.1.2/no information Comber-34.1.2/no information
ESP-NAO-PMP-VL0010-NGI-NO-	Common octopus-27.9.a/no information EQK-27.9.a/no information Stony sea urchin-27.9.a/no information Barnacle-27.8.c/no information Common octopus-27.8.c/no information Common cuttlefish-27.9.a/no information Barnacle-27.9.a/no information bss.27.8c9a/no information Common prawn-27.9.a/no information Pullet carpet shell-27.9.a/no information Spinous spider crab-27.9.a/no information Velvet swimcrab-27.9.a/no information mac.27.nea/assessed Meagre-27.9.a/no information Banded carpet shell-27.9.a/no information hke.27.8c9a/assessed European conger-27.8.c/no information Queen scallop-27.9.a/no information European conger-27.9.a/no information White seabream-27.9.a/no information Japanese carpet shell-27.9.a/no information
ESP-NAO-PMP-VL1012-IC-NO-	USA-34.1.2/no information Barred grunt-34.1.2/no information TVD-34.1.2/no information Pink dentex-34.1.2/no information alb-na/no information Common pandora-34.1.2/no information European squid-34.1.2/no information Red porgy-34.1.2/no information
ESP-NAO-PS-VL0010-NGI-NO-	bss.27.8c9a/no information White seabream-27.9.a/no information
ESP-NAO-PS-VL1012-NGI-NO-	Blood-stained turbo-27.9.a/no information Blood-stained turbo-27.8.c/no information Barred grunt-27.9.a/no information Allardice's moray-27.9.a/no information Smooth mactra-27.9.a/no information hom.27.9a/assessed
ESP-NAO-PS-VL1218-NGI-NO-	XOX-27.9.a/no information White croaker-27.9.a/no information UMA-27.9.a/no information Twobar seabream-27.9.a/no information Twobar seabream-27.8.c/no information TNF-27.9.a/no information Snooks(=Robalos) nei-27.9.a/no information Silver croaker-27.9.a/no information Sevenstar flying squid-27.9.a/no information Seabasses nei-27.8.c/no information Seabasses nei-27.9.a/no information Sawfishes-27.9.a/no information Sand smelts nei-27.9.a/no information

	Reticulate round ray-27.8.c/no information Pacific harvestfish-27.9.a/no information Other-27.9.a/no information Mountain mullet-27.9.a/no information Largescale fat snook-27.9.a/no information KZW-27.9.a/no information King soldier bream-27.8.c/no information King crab-27.9.a/no information JNX-27.9.a/no information Golden trevally-27.9.a/no information Giant catfish-27.9.a/no information Commerson's dolphin-27.9.a/no information Boeseman croaker-27.8.c/no information Bigscale anchovy-27.9.a/no information Blood-stained turbo-27.9.a/no information Yellowtip halfbeak-27.9.a/no information Alaska plaice-27.8.c/no information Atlantic menhaden-27.9.a/no information Australian bonito-27.9.a/no information Barathronus maculatus-27.9.a/no information Barred grunt-27.9.a/no information Bifid clingfish-27.9.a/no information
ESP-NAO-PS-VL1824-NGI-NO-	Seabasses nei-27.8.c/no information NXC-27.9.a/no information NYS-27.8.c/no information OBA-27.9.a/no information Reticulate round ray-27.9.a/no information Sciaenas nei-27.8.b/no information Seabasses nei-27.8.b/no information Seabasses nei-27.9.a/no information Silver croaker-27.9.a/no information Silver seabream-27.9.a/no information TNF-27.9.a/no information Twobar seabream-27.8.c/no information Twobar seabream-27.9.a/no information White croaker-27.9.a/no information Windowpane flounder-27.8.c/no information Anchovies, etc. nei-27.9.a/no information Australian bonito-27.9.a/no information Blue mackerel-27.9.a/no information Boeseman croaker-27.9.a/no information Brama spp-27.8.c/no information King soldier bream-27.8.c/no information King soldier bream-27.9.a/no information Malabar grouper-27.9.a/no information
ESP-NAO-PS-VL2440-NGI-NO-	Twobar seabream-27.8.c/no information Mountain mullet-27.8.b/no information Mountain mullet-27.8.c/no information NYS-27.8.c/no information Round scad-27.8.b/no information Seabasses nei-27.8.b/no information Seabasses nei-27.8.c/no information Shortjaw leatherjacket-27.8.c/no information Silver seabream-27.8.c/no information Twobar seabream-27.8.b/no information Longfin mojarra-27.8.b/no information West coast seabream-27.8.c/no information African forktail snapper-27.8.c/no information Bay anchovy-27.8.b/no information Burmeister's porpoise-27.8.c/no information Chars nei-27.8.c/no information GDJ-27.8.c/no information Karanteen seabream-27.8.c/no information
EST-NAO-PG-VL0010-NGI--	European perch-27.3.d.28/no information European perch-27.3.d.29/no information Pike-perch-27.3.d.28/no information European smelt-27.3.d.28/no information
FIN-NAO-PG-VL0010-NGI--	sal.27.22-31/no information Whitefishes nei-27.3.d.31/no information European perch-27.3.d.30/no information Pike-perch-27.3.d.30/no information Whitefishes nei-27.3.d.30/no information her.27.3031/assessed Pike-perch-27.3.d.29/no information European perch-27.3.d.29/no information Pike-perch-27.3.d.32/no information European smelt-27.3.d.30/no information Atlantic salmon-27.3.d.32/no information Vendace-27.3.d.31/no information
FRA-NAO-DFN-VL0010-NGI--	bss.27.8ab/assessed sol.27.8ab/assessed Gilthead seabream-27.8.a/no information Surmullet-27.8.a/no information Gilthead seabream-27.7.e/no information pol.27.89a/no information Meagre-27.8.b/no information bss.27.4bc7ad-h/assessed sol.27.7d/assessed Gilthead seabream-27.8.b/no information sol.27.7e/assessed Spinous spider crab-27.7.e/no information mon.27.78abd/assessed European lobster-27.7.e/no information Common cuttlefish-27.8.b/no information Sand steenbras-27.8.b/no information hke.27.3a46-8abd/assessed White seabream-27.8.b/no information Common cuttlefish-27.8.a/no information European lobster-27.8.a/no information Surmullet-27.7.e/no information sdv.27.nea/no information Turbot-27.8.a/no information sol.27.4/assessed Black seabream-27.8.a/no information Turbot-27.7.d/no information Thicklip grey mullet-27.8.a/no information Common cuttlefish-27.7.e/no information pol.27.67/no information Common prawn-27.8.a/no information whg.27.89a/no information Thicklip grey mullet-27.7.e/no information Spinous spider crab-27.8.a/no information rjc.27.3a47d/no information
FRA-NAO-DFN-VL1012-NGI--	sol.27.8ab/assessed sol.27.7d/assessed sol.27.4/assessed Spinous spider crab-27.7.e/no information mon.27.78abd/assessed bss.27.8ab/assessed pol.27.89a/no information ank.27.78abd/assessed Gilthead seabream-27.8.a/no information Great Atlantic scallop-27.7.e/no information hke.27.3a46-8abd/assessed Meagre-27.8.b/no information Common cuttlefish-27.7.d/no information European lobster-27.7.d/no information bss.27.4bc7ad-h/assessed bll.27.3a47de/no information Edible crab-27.7.e/no information Black seabream-27.8.a/no information Turbot-27.7.d/no information
FRA-NAO-DFN-VL1824-NGI--	hke.27.3a46-8abd/assessed sol.27.8ab/assessed European hake-27.7.j/no information mon.27.78abd/assessed
FRA-NAO-DTS-VL1012-NGI--	Great Atlantic scallop-27.7.d/no information nep.fu.2324/assessed Great Atlantic scallop-27.7.e/no information Common cuttlefish-27.8.a/no information sol.27.8ab/assessed mac.27.nea/assessed Inshore squids nei-27.8.a/no information Common cuttlefish-27.7.e/no information sol.27.7d/assessed bss.27.8ab/assessed Wedge sole-27.8.b/no information Great Atlantic scallop-27.8.a/no information hke.27.3a46-8abd/assessed Queen scallop-27.7.d/no information ple.27.7d/assessed Common shrimp-27.8.a/no information sol.27.7e/assessed Black seabream-27.8.a/no information
FRA-NAO-DTS-VL1218-NGI--	nep.fu.2324/assessed Great Atlantic scallop-27.7.d/no information mon.27.78abd/assessed sol.27.8ab/assessed hke.27.3a46-8abd/assessed meg.27.7b-k8abd/assessed ank.27.78abd/assessed

	John dory-27.8.a/no information Common cuttlefish-27.8.b/no information bss.27.8ab/assessed Common cuttlefish-27.8.a/no information Great Atlantic scallop-27.7.e/no information Common cuttlefish-27.7.e/no information sol.27.7d/assessed Inshore squids nei-27.8.a/no information
FRA-NAO-DTS-VL1824-NGI--	mon.27.78abd/assessed Inshore squids nei-27.7.d/no information ank.27.78abd/assessed Monkfishes nei-27.7.j/no information alb-na/no information meg.27.7b-k8abd/assessed had.27.7b-k/assessed mac.27.nea/assessed whg.27.7b-ce-k/assessed hke.27.3a46-8abd/assessed nep.fu.2324/assessed Inshore squids nei-27.4.c/no information Common cuttlefish-27.8.a/no information whg.27.47d/assessed bss.27.8ab/assessed John dory-27.8.a/no information Common cuttlefish-27.7.d/no information sol.27.8ab/assessed Inshore squids nei-27.8.a/no information John dory-27.7.e/no information Common cuttlefish-27.7.e/no information Inshore squids nei-27.7.e/no information Black seabream-27.7.e/no information sdv.27.nea/no information Cuckoo ray-27.7.h/no information cod.27.7e-k/assessed John dory-27.7.f/no information rjc.27.3a47d/no information mur.27.3a47d/no information Surmullet-27.8.a/no information Cuckoo ray-27.8.a/no information
FRA-NAO-DTS-VL2440-NGI--	Monkfishes nei-27.7.j/no information mon.27.78abd/assessed Monkfishes nei-27.7.c/no information Megrims nei-27.7.j/no information had.27.7b-k/assessed John dory-27.7.e/no information ank.27.78abd/assessed mac.27.nea/assessed hke.27.3a46-8abd/assessed anf.27.3a46/no information Inshore squids nei-27.7.d/no information whg.27.7b-ce-k/assessed John dory-27.7.h/no information meg.27.7b-k8abd/assessed Inshore squids nei-27.7.e/no information European hake-27.7.j/no information mur.27.3a47d/no information alb-na/no information Megrims nei-27.7.c/no information Common cuttlefish-27.7.e/no information Common cuttlefish-27.7.h/no information gur.27.3-8/no information Lemon sole-27.7.h/no information
FRA-NAO-DTS-VL40XX-NGI--	pok.27.3a46/assessed cod.27.1-2/assessed Atlantic cod-27.2.b/no information bsf.27.nea/no information hke.27.3a46-8abd/assessed anf.27.3a46/no information
FRA-NAO-HOK-VL0010-NGI--	bss.27.8ab/assessed bss.27.4bc7ad-h/assessed pol.27.89a/no information pol.27.67/no information Meagre-27.8.b/no information European conger-27.8.a/no information whg.27.89a/no information hke.27.3a46-8abd/assessed
FRA-NAO-MGO-VL0010-NGI--	Meagre-27.8.b/no information bss.27.8ab/assessed Common prawn-27.8.a/no information European eel-27.8.a/no information Meagre-27.8.d/no information sol.27.8ab/assessed European lobster-27.8.a/no information Gilthead seabream-27.8.a/no information European eel-27.8.b/no information
FRA-NAO-MGP-VL1824-NGI--	alb-na/no information mac.27.nea/assessed Inshore squids nei-27.7.d/no information bss.27.8ab/assessed hke.27.3a46-8abd/assessed Black seabream-27.7.e/no information Inshore squids nei-27.4.c/no information Common cuttlefish-27.8.a/no information Great Atlantic scallop-27.7.d/no information pil.27.8abd/assessed Inshore squids nei-27.8.a/no information her.27.3a47d/assessed whg.27.47d/assessed Common cuttlefish-27.7.d/no information European pilchard(=Sardine)-27.7.d/no information Black seabream-27.7.d/no information bft-ea/no information
FRA-NAO-MGP-VL2440-NGI--	Inshore squids nei-27.7.d/no information alb-na/no information Inshore squids nei-27.4.c/no information mac.27.nea/assessed whg.27.47d/assessed mur.27.3a47d/no information hke.27.3a46-8abd/assessed bss.27.8ab/assessed Common cuttlefish-27.7.d/no information Inshore squids nei-27.8.a/no information Surmullet-27.8.b/no information
FRA-NAO-PS-VL1824-NGI--	pil.27.8abd/assessed hom.27.2a4a5b6a7a-ce-k8/assessed bft-ea/no information European pilchard(=Sardine)-27.7.e/no information
FRA-NAO-TBB-VL1218-NGI--	Great Atlantic scallop-27.7.d/no information sol.27.7d/assessed Queen scallop-27.7.d/no information
FRA-NAO-TM-VL1218-NGI--	alb-na/no information pil.27.8abd/assessed hke.27.3a46-8abd/assessed bss.27.8ab/assessed Mediterranean horse mackerel-27.8.a/no information bft-ea/no information Inshore squids nei-27.8.a/no information
FRA-NAO-TM-VL1824-NGI--	alb-na/no information hke.27.3a46-8abd/assessed pil.27.8abd/assessed bss.27.8ab/assessed bft-ea/no information Common cuttlefish-27.8.a/no information mon.27.78abd/assessed mac.27.nea/assessed
GBR-NAO-DFN-VL0010-NGI--	sol.27.7d/assessed bss.27.4bc7ad-h/assessed pol.27.67/no information sol.27.7e/assessed Whelk-27.7.g/no information sol.27.4/assessed ple.27.7d/assessed rjc.27.3a47d/no information mon.27.78abd/assessed Whelk-27.7.d/no information Turbot-27.7.e/no information Cuttlefish, bobtail squids nei-27.7.d/no information Edible crab-27.7.e/no information mac.27.nea/assessed Whelk-27.7.e/no information European lobster-27.7.f/no information Turbot-27.7.f/no information
GBR-NAO-DFN-VL1824-NGI--	hke.27.3a46-8abd/assessed European hake-27.7.j/no information pol.27.67/no information mon.27.78abd/assessed
GBR-NAO-DTS-VL1218-NGI--	nep.fu.13/assessed nep.fu.12/assessed nep.fu.15/assessed nep.fu.11/assessed nep.fu.7/assessed nep.fu.8/assessed nep.fu.6/assessed anf.27.3a46/no information nep.fu.5/no information

	nep.fu.33/no information Cuttlefish, bobtail squids nei-27.7.e/no information Great Atlantic scallop-27.7.a/no information Lemon sole-27.7.e/no information
GBR-NAO-DTS-VL1824-NGI--	anf.27.3a46/no information cod.27.47d20/assessed nep.fu.7/assessed had.27.46a20/assessed nep.fu.15/assessed whg.27.47d/assessed lez.27.4a6a/assessed Common squids nei-27.4.a/no information nep.fu.9/assessed nep.fu.13/assessed pok.27.3a46/assessed Norway lobster-27.7.k/no information lin.27.3a4a6-91214/no information had.27.7a/assessed hke.27.3a46-8abd/assessed
GBR-NAO-DTS-VL2440-NGI--	cod.27.47d20/assessed had.27.46a20/assessed anf.27.3a46/no information hke.27.3a46-8abd/assessed whg.27.47d/assessed pok.27.3a46/assessed ple.27.420/assessed Anglerfishes nei-27.7.j/no information lin.27.3a4a6-91214/no information had.27.6b/assessed
GBR-NAO-DTS-VL40XX-NGI--	Atlantic cod-27.2.a/no information Atlantic cod-27.1/no information ple.27.420/assessed Atlantic cod-27.2.b/no information pok.27.3a46/assessed Atlantic cod-27.14.b/no information cod.27.47d20/assessed
GBR-NAO-FPO-VL0010-NGI--	European lobster-27.4.b/no information Edible crab-27.6.a/no information Edible crab-27.4.a/no information Edible crab-27.4.b/no information European lobster-27.6.a/no information nep.fu.13/assessed European lobster-27.4.a/no information Whelk-27.7.d/no information European lobster-27.7.a/no information Ballan wrasse-27.6.a/no information Edible crab-27.7.e/no information Whelk-27.7.a/no information Edible crab-27.7.a/no information Velvet swimcrab-27.6.a/no information nep.fu.12/assessed Whelk-27.4.c/no information Edible crab-27.7.f/no information
GBR-NAO-FPO-VL1218-NGI--	Edible crab-27.4.b/no information Edible crab-27.6.a/no information Edible crab-27.7.e/no information Whelk-27.7.a/no information European lobster-27.4.b/no information Edible crab-27.7.f/no information Edible crab-27.4.a/no information
GBR-NAO-HOK-VL0010-NGI--	bss.27.4bc7ad-h/assessed Solen razor clams nei-27.6.a/no information mac.27.nea/assessed Great Atlantic scallop-27.6.a/no information Solen razor clams nei-27.4.b/no information pol.27.67/no information
GBR-NAO-TBB-VL2440-NGI--	Cuttlefish, bobtail squids nei-27.7.e/no information sol.27.7e/assessed mon.27.78abd/assessed Great Atlantic scallop-27.7.e/no information meg.27.7b-k8abd/assessed Turbot-27.7.e/no information ple.27.7e/assessed
GBR-NAO-TM-VL40XX-NGI--	mac.27.nea/assessed her.27.1-24a514a/assessed
IRL-NAO-DTS-VL1012-NGI--	Norway lobster-27.7.j/no information European sprat-27.7.a/no information nep.fu.15/assessed Megrims nei-27.7.j/no information Anglerfishes nei-27.7.j/no information pol.27.67/no information nep.fu.22/assessed Palaemonid shrimps nei-27.7.g/no information her.27.irls/assessed nep.fu.2021/assessed Common shrimp-27.7.a/no information
IRL-NAO-DTS-VL1824-NGI--	Norway lobster-27.7.k/no information nep.fu.2021/assessed nep.fu.22/assessed Norway lobster-27.7.c/no information nep.fu.15/assessed whg.27.7b-ce-k/assessed mon.27.78abd/assessed hke.27.3a46-8abd/assessed meg.27.7b-k8abd/assessed nep.fu.19/assessed nep.fu.16/assessed European hake-27.7.j/no information mac.27.nea/assessed Anglerfishes nei-27.7.j/no information anf.27.3a46/no information cod.27.7e-k/assessed had.27.7b-k/assessed
IRL-NAO-DTS-VL2440-NGI--	Norway lobster-27.7.k/no information nep.fu.2021/assessed Norway lobster-27.7.c/no information whg.27.7b-ce-k/assessed nep.fu.22/assessed mac.27.nea/assessed Common squids nei-27.6.b/no information Common cuttlefish-27.7.e/no information mon.27.78abd/assessed anf.27.3a46/no information hke.27.3a46-8abd/assessed alb-na/no information nep.fu.15/assessed European hake-27.7.j/no information had.27.46a20/assessed meg.27.7b-k8abd/assessed Megrims nei-27.6.b/no information Anglerfishes nei-27.6.b/no information Norway lobster-27.7.j/no information had.27.7a/assessed
IRL-NAO-TM-VL1012-NGI--	her.27.6a7bc/assessed mac.27.nea/assessed Common sole-27.6.a/no information sol.27.7bc/no information anf.27.3a46/no information Rays, stingrays, mantas nei-27.7.b/no information her.27.irls/assessed Turbot-27.7.b/no information
IRL-NAO-TM-VL1218-NGI--	her.27.6a7bc/assessed
IRL-NAO-TM-VL1824-NGI--	alb-na/no information mac.27.nea/assessed whb.27.1-91214/assessed Atlantic mackerel-27.7.j/no information
IRL-NAO-TM-VL2440-NGI--	mac.27.nea/assessed whb.27.1-91214/assessed alb-na/no information hom.27.2a4a5b6a7a-ce-k8/assessed
IRL-NAO-TM-VL40XX-NGI--	mac.27.nea/assessed hom.27.2a4a5b6a7a-ce-k8/assessed
LTU-NAO-DFN-VL1012-NGI--	Atlantic cod-27.3.d.26/no information European smelt-27.3.d.26/no information
LTU-NAO-DFN-VL2440-NGI--	Atlantic cod-27.3.d.26/no information

LTU-NAO-DTS-VL1824-NGI--	Atlantic cod-27.3.d.26/no information spr.27.22-32/assessed her.27.25-2932/assessed
LTU-NAO-DTS-VL2440-NGI--	Atlantic cod-27.3.d.26/no information spr.27.22-32/assessed
NLD-NAO-PG-VL0010-NGI--	bss.27.4bc7ad-h/assessed Thinlip grey mullet-27.4.c/no information
NLD-NAO-PG-VL1012-NGI--	sol.27.4/assessed bss.27.4bc7ad-h/assessed
NLD-NAO-TBB-VL2440-NGI--	Pouting(=Bib)-27.4.b/no information sol.27.4/assessed ple.27.420/assessed Common shrimp-27.4.b/no information
NLD-NAO-TBB-VL40XX-NGI--	sol.27.4/assessed ple.27.420/assessed
NLD-NAO-TM-VL40XX-NGI--	her.27.3a47d/assessed whb.27.1-91214/assessed mac.27.nea/assessed her.27.1-24a514a/assessed hom.27.2a4a5b6a7a-ce-k8/assessed Blue whiting(=Poutassou)-27.7.c/no information
POL-NAO-DFN-VL1218-NGI--	Atlantic cod-27.3.d.25/no information trs.27.22-32/no information sal.27.22-31/no information
POL-NAO-DTS-VL1218-NGI--	fle.27.2425/no information Atlantic cod-27.3.d.25/no information cod.27.22-24/assessed Atlantic cod-27.3.d.26/no information trs.27.22-32/no information
POL-NAO-DTS-VL1824-NGI--	fle.27.2425/no information Atlantic cod-27.3.d.25/no information Atlantic cod-27.3.d.26/no information spr.27.22-32/assessed
POL-NAO-DTS-VL40XX-NGI--	
POL-NAO-PG-VL0010-NGI--	European perch-27.3.d.24/no information Pike-perch-27.3.d.26/no information Atlantic cod-27.3.d.25/no information European eel-27.3.d.26/no information European eel-27.3.d.24/no information trs.27.22-32/no information her.27.25-2932/assessed Freshwater bream-27.3.d.24/no information fle.27.2425/no information Freshwater bream-27.3.d.26/no information
POL-NAO-PG-VL1012-NGI--	Atlantic cod-27.3.d.25/no information fle.27.2425/no information trs.27.22-32/no information ple.27.24-32/no information
PRT-NAO-DFN-VL1218-NGI--	Common octopus-27.9.a/no information John dory-27.9.a/no information ank.27.8c9a/assessed sol.27.8c9a/no information hke.27.8c9a/assessed Pouting(=Bib)-27.9.a/no information Common cuttlefish-27.9.a/no information bss.27.8c9a/no information rjc.27.9a/no information Turbot-27.9.a/no information rjh.27.9a/no information Surmullet-27.9.a/no information Thickback sole-27.9.a/no information Thickback soles nei-27.9.a/no information Red porgy-27.9.a/no information Common spiny lobster-27.9.a/no information
PRT-NAO-DTS-VL1824-NGI--	Scarlet shrimp-27.9.a/no information Deep-water rose shrimp-27.9.a/no information nep.fu.2829/assessed
PRT-NAO-DTS-VL2440-NGI--	hom.27.9a/assessed mac.27.nea/assessed Deep-water rose shrimp-27.9.a/no information whb.27.1-91214/assessed European squid-27.9.a/no information hke.27.8c9a/assessed nep.fu.2829/assessed Common octopus-27.9.a/no information
PRT-NAO-DTS-VL40XX-IWE--	Atlantic redfishes nei-21.3.m/no information cod-3m/no information Atlantic redfishes nei-21.3.o/no information Greenland halibut-21.3.l/no information Atlantic cod-27.2.a/no information
PRT-NAO-HOK-VL1012-NGI--	bss.27.8c9a/no information Wreckfish-27.9.a/no information European conger-27.9.a/no information Blackbelly rosefish-27.9.a/no information Red porgy-27.9.a/no information rjc.27.9a/no information sbr.27.9/no information
PRT-NAO-HOK-VL1218-NGI--	bsf.27.nea/no information Blue shark-27.9.a/no information Wreckfish-27.9.a/no information sbr.27.9/no information Red porgy-27.9.a/no information
PRT-NAO-HOK-VL1824-NGI--	swo-na/assessed bsf.27.nea/no information Wreckfish-27.9.a/no information Blue shark-27.10.a/no information Atlantic sailfish-27.9.a/no information Blue shark-27.9.a/no information
PRT-NAO-HOK-VL2440-NGI--	swo-na/assessed Blue shark-27.10.a/no information bsf.27.nea/no information Blue shark-34.2/no information Blue shark-27.10.b/no information
PRT-NAO-PGP-VL0010-NGI--	Common octopus-27.9.a/no information Common edible cockle-27.9.a/no information Common cuttlefish-27.9.a/no information bss.27.8c9a/no information Meagre-27.9.a/no information sol.27.8c9a/no information Gilthead seabream-27.9.a/no information White seabream-27.9.a/no information Surmullet-27.9.a/no information European conger-27.9.a/no information Pullet carpet shell-27.9.a/no information
PRT-NAO-PS-VL0010-NGI--	ane.27.9a/no information pil.27.8c9a/assessed hom.27.9a/assessed
PRT-NAO-PS-VL1012-NGI--	ane.27.9a/no information pil.27.8c9a/assessed Chub mackerel-27.9.a/no information hom.27.9a/assessed
PRT-NAO-PS-VL1218-NGI--	pil.27.8c9a/assessed hom.27.9a/assessed Chub mackerel-27.9.a/no information ane.27.9a/no

	information
PRT-NAO-PS-VL1824-NGI--	pil.27.8c9a/assessed ane.27.9a/no information Chub mackerel-27.9.a/no information
PRT-NAO-PS-VL2440-NGI--	pil.27.8c9a/assessed ane.27.9a/no information Chub mackerel-27.9.a/no information
SWE-NAO-DFN-VL0010-NGI--	cod.27.22-24/assessed her.27.3031/assessed Atlantic cod-27.3.d.25/no information Whitefishes nei-27.3.d.31/no information Atlantic mackerel-27.3.a/no information European eel-27.3.d.27/no information Edible crab-27.3.a/no information European perch-27.3.d.30/no information Lumpfish(=Lumpsucker)-27.3.a/no information Whitefishes nei-27.3.d.30/no information sal.27.22-31/no information cod.27.21/no information Lumpfish(=Lumpsucker)-27.3.b.23/no information Common sole-27.3.a/no information Vendace-27.3.d.31/no information European perch-27.3.d.25/no information European eel-27.3.d.25/no information trs.27.22-32/no information Northern pike-27.3.d.25/no information
SWE-NAO-DFN-VL1012-NGI--	cod.27.22-24/assessed Vendace-27.3.d.31/no information her.27.20-24/assessed her.27.3031/assessed cod.27.21/no information Atlantic mackerel-27.3.a/no information pol.27.3a4/no information
SWE-NAO-DFN-VL1218-NGI--	cod.27.22-24/assessed fle.27.2628/no information Turbot-27.3.d.24/no information
SWE-NAO-DTS-VL0010-NGI--	nep.fu.3-4/assessed
SWE-NAO-DTS-VL1824-NGI--	pra.27.3a4a/assessed nep.fu.3-4/assessed cod.27.21/no information Atlantic cod-27.3.d.26/no information wit.27.3a47d/assessed
SWE-NAO-FPO-VL0010-NGI--	nep.fu.3-4/assessed sal.27.22-31/no information European lobster-27.3.a/no information Corkwing wrasse-27.3.a/no information Goldsinny-wrasse-27.3.a/no information European eel-27.3.d.25/no information
SWE-NAO-FPO-VL1012-NGI--	nep.fu.3-4/assessed
SWE-NAO-HOK-VL0010-NGI--	Atlantic mackerel-27.3.a/no information European lobster-27.3.a/no information cod.27.21/no information
SWE-NAO-HOK-VL1012-NGI--	Atlantic cod-27.3.d.25/no information cod.27.22-24/assessed cod.27.21/no information
SWE-NAO-PS-VL40XX-NGI--	her.27.3a47d/assessed Atlantic mackerel-27.2.a/no information her.27.1-24a514a/assessed
SWE-NAO-TM-VL2440-NGI--	her.27.3031/assessed her.27.25-2932/assessed her.27.3a47d/assessed spr.27.22-32/assessed
SWE-NAO-TM-VL40XX-NGI--	her.27.25-2932/assessed her.27.3a47d/assessed spr.27.22-32/assessed her.27.1-24a514a/assessed European sprat-27.3.d.28/no information

For Area37 for fleets with sar >0

fleet_code	major_stocks
BGR-MBS-HOK-VL0006-NGI--	dgs-gsa29/assessed Gobies nei-sa 29/no information Bluefish-sa 29/no information
BGR-MBS-HOK-VL0612-NGI--	dgs-gsa29/assessed tur-gsa29/assessed Bluefish-sa 29/no information
BGR-MBS-PMP-VL1218-NGI--	rpw-gsa29/assessed mut-gsa29/assessed
BGR-MBS-PMP-VL1824-NGI--	rpw-gsa29/assessed Bluefish-sa 29/no information spr-gsa29/assessed mut-gsa29/assessed
BGR-MBS-TM-VL1218-NGI--	spr-gsa29/assessed mut-gsa29/assessed Bluefish-sa 29/no information
ESP-MBS-DFN-VL0612-NGI-NO-	Caribbean spiny lobster-sa 5/no information YOD-sa 5/no information Yamato shrimp-sa 6/no information WLF-sa 6/no information Widow rockfish-sa 5/no information Whitson's grenadier-sa 6/no information Whitespotted conger-sa 6/no information White sardine-sa 6/no information Whitehead's round herring-sa 6/no information UOC-sa 6/no information UFA-sa 6/no information TTM-sa 6/no information TTA-sa 6/no information Tropical spiny lobsters nei-sa 6/no information Tristan da Cunha rock lobster-sa 6/no information Ticon cownose ray-sa 1/no information Talang queenfish-sa 6/no information Swamp ghost crab-sa 6/no information Surf clams nei-sa 6/no information SUG-sa 6/no information Streaked seerfish-sa 6/no information Starspotted smooth-hound-sa 6/no information Stalix histrio-sa 6/no information Spotted ratfish-sa 6/no information Spotted estuary smooth-hound-sa 6/no information Spotless smooth-hound-sa 6/no information Spotless smooth-hound-sa 1/no information Spotfin dragonet-sa 6/no information Spinner shark-sa 6/no information Spinefeet(=Rabbitfishes) nei-sa 6/no information Speckled blue grouper-sa 1/no information Spaghetti eel-sa 6/no information Spadenose shark-sa 6/no information Southern spiny lobster-sa 6/no information Southeast Atlantic soles nei-sa 5/no information So-iny (redlip) mullet-sa 6/no

	information Softshell red crab-sa 6/no information Sockeye(=Red) salmon-sa 6/no information Snubnose pompano-sa 6/no information Smalltooth emperor-sa 6/no information Smalleye catshark-sa 5/no information Slinger seabream-sa 6/no information Slinger seabream-sa 5/no information Slender snipe eel-sa 6/no information Slantlip eel-sa 5/no information Silver seatrout-sa 6/no information Shortfin scad-sa 6/no information Sharptooth smooth-hound-sa 6/no information Shango dragonet-sa 6/no information SGO-sa 6/no information SFH-sa 6/no information Serra Spanish mackerel-sa 6/no information SEP-sa 6/no information Seabasses nei-sa 6/no information Sculpins-sa 6/no information Scats-sa 6/no information Santer seabream-sa 6/no information SAD-sa 6/no information Saddletail grouper-sa 6/no information RRS-sa 6/no information Round scad-sa 6/no information Rough pomfret-sa 6/no information Rough leatherjackets-sa 6/no information Rock violet-sa 6/no information Ribeiroclinus eigenmanni-sa 1/no information Red cusk-eel-sa 6/no information RCC-sa 6/no information Radiate semele-sa 6/no information RAA-sa 6/no information Purple brotula-sa 6/no information Ploughfish-sa 1/no information Plata pompano-sa 6/no information Petrale sole-sa 6/no information Peruvian weakfish-sa 6/no information PDG-sa 1/no information Pacific seabobs-sa 6/no information Pacific sandlance-sa 6/no information Pacific cownose ray-sa 6/no information Pacific cownose ray-sa 1/no information Oval grouper-sa 6/no information Otophidium chickcharney-sa 6/no information Ornate spiny lobster-sa 6/no information ORB-sa 6/no information NSE-sa 5/no information Northern red snapper-sa 6/no information NMY-sa 6/no information New Zealand mussel-sa 6/no information Neptune rose shrimp-sa 6/no information Narrowtail catshark-sa 6/no information Narrow otter shell-sa 6/no information Moray cods nei-sa 6/no information Monopenchelys acuta-sa 6/no information MFU-sa 6/no information MEF-sa 6/no information MDK-sa 6/no information Marbled rockcod-sa 6/no information Mangrove red snapper-sa 5/no information Malabar grouper-sa 6/no information Luminous flying squid-sa 6/no information LSF-sa 6/no information Longhead dab-sa 6/no information Longfin trevally-sa 6/no information Longfin squid-sa 6/no information Lenok-sa 6/no information Leister-sa 6/no information Leaping bonito-sa 6/no information Leaftail croaker-sa 6/no information LCB-sa 6/no information Lavender jobfish-sa 6/no information Lampadena speculigera-sa 6/no information Lambis spp-sa 5/no information Lake(=Common) whitefish-sa 5/no information Kroyer's deep-sea angler fish-sa 6/no information Korean mussel-sa 6/no information Korean mussel-sa 1/no information Khadary-whitefish-sa 6/no information JLM-sa 6/no information JFA-sa 6/no information JEC-sa 6/no information Jeboehlkia gladifer-sa 6/no information Japanese scad-sa 6/no information HUR-sa 6/no information Horse mussels nei-sa 6/no information Hooktooth shark-sa 6/no information Halicmetus reticulatus-sa 1/no information Gulf toadfish-sa 6/no information Green birdmouth wrasse-sa 6/no information Goto's herring-sa 6/no information Goldstripe sardinella-sa 6/no information Goatsbeard brotula-sa 6/no information Giant boarfish-sa 6/no information GFG-sa 6/no information FUT-sa 6/no information Fringebarbel sturgeon-sa 6/no information Freckled driftfish-sa 5/no information Fransmadam-sa 6/no information Finetooth shark-sa 6/no information FIF-sa 6/no information European edible sea urchin-sa 1/no information ESZ-sa 6/no information EGS-sa 6/no information Eelpouts nei-sa 6/no information Easter damselfish-sa 6/no information DRC-sa 5/no information Dosinia clam-sa 6/no information Diadromous fishes nei-sa 6/no information DGC-sa 6/no information Deepwater longtail red snapper-sa 6/no information Deep-sea smelt-sa 6/no information DAL-sa 6/no information Daggertooth pike conger-sa 5/no information Cuskpout-sa 6/no information Crimson coral shrimp-sa 6/no information Cotylopus acutipinnis-sa 6/no information Comb venus-sa 6/no information Cobia-sa 6/no information Cholga mussel-sa 6/no information Chola guitarfish-sa 6/no information Chinese mitten crab-sa 6/no information Chilean mussel-sa 6/no information Channeled tun-sa 1/no information Chain moray-sa 5/no information Cero-sa 6/no information Centrobranchus andreae-sa 6/no information Castaneta-sa 6/no information Caspian anadromous shad-sa 6/no information Cape redfish-sa 6/no information Callinectes swimcrabs nei-sa 6/no information California lizardfish-sa 5/no information Calico scallop-sa 5/no information Butterfly bobtail squid-sa 6/no information Bull shark-sa 6/no information Brown driftfish-sa 6/no information Bronze croaker-sa 6/no information Brightbelly sculpin-sa 6/no information Brazilian sardinella-sa 6/no information Boeseman croaker-sa 6/no information Boeseman croaker-sa 1/no information Bocaccio rockfish-sa 6/no information Bocaccio rockfish-sa 1/no information Bobo mullet-sa 6/no information Bluespotted cornetfish-sa 6/no information Black seabass-sa 6/no information Black pomfret-sa 6/no information Black cusk-eel-sa 6/no information Blachea xenobranchialis-sa 6/no information Bigmouth skate-sa 6/no information Big-claw purple hermit crab-sa 1/no information Bifid clingfish-sa 6/no information Benthophilus baeri-sa 6/no information Benthophilus baeri-sa 1/no information Bent-beak murex-sa 6/no information BBD-sa 6/no information BAY-sa 6/no information Bathylagus gracilis-sa 6/no information Barbfish-sa 6/no information Balao halfbeak-sa 1/no information Atlantic searobins-sa 6/no information Atlantic seabob-sa 6/no information Atlantic bay scallop-sa 6/no information Atka mackerel-sa 6/no information Arabian carpetshark-sa 6/no information Angelfishes nei-sa 6/no information American shad-sa 6/no information American sea scallop-sa 6/no information
ESP-MBS-DTS-VL1218-NGI-NO-	Sillago-whitings-sa 6/no information Sillago-whitings-sa 1/no information Shorthead anchovy-sa 6/no information Sharptooth smooth-hound-sa 1/no information Sharp-spined notothenia-sa 1/no information Chola guitarfish-sa 1/no information Chocolate rockshell-sa 6/no information Chars nei-sa 6/no information CFL-sa 6/no information Centrobranchus andreae-sa 6/no information CCA-sa 6/no information Catalonian striped shrimp-sa 6/no information Catalonian striped shrimp-sa 1/no information Cape rock lobster-sa 6/no information California lizardfish-sa 1/no information Calico scallop-sa 5/no information Cabinza grunt-sa 1/no information Butterfly bobtail squid-sa 6/no information Buffalo sculpin-sa 6/no information Brownspotted catshark-sa 1/no information Brown spiny loster-sa 1/no information Broadfin sawtail catshark-sa 1/no information Brightbelly sculpin-sa 6/no information Brightbelly sculpin-sa 1/no information Brazilian groupers nei-sa 1/no information Bonga shad-sa 6/no information Bocaccio rockfish-sa 6/no information Blue

mackerel-sa 6/no information Blue mackerel-sa 1/no information BLK-sa 6/no information Bleeker smoothbelly sardinella-sa 6/no information Black stone crab-sa 1/no information Blacksaddle herring-sa 6/no information Blacksaddle herring-sa 1/no information Black brotula-sa 1/no information Blachea xenobranchialis-sa 6/no information Blachea xenobranchialis-sa 1/no information Biglip grunt-sa 6/no information Bigfin anchovy-sa 6/no information Bifid clingfish-sa 6/no information Bering shrimp-sa 6/no information Benthophilus baeri-sa 6/no information Beach silverside-sa 6/no information BDT-sa 6/no information Bay anchovy-sa 1/no information Barracudinas, etc. nei-sa 6/no information Barbeled houndshark-sa 6/no information Barbeled catshark-sa 6/no information Aulotrachichthys novaezelandicus-sa 1/no information Atlantic searobins-sa 6/no information Atlantic searobins-sa 1/no information Atlantic sabretooth anchovy-sa 6/no information ARM-sa 6/no information Argentine anchovy-sa 6/no information Arctic rockling-sa 1/no information Arctic flounder-sa 6/no information Arctic flounder-sa 1/no information Apocryptes bato-sa 6/no information Antarctic armless flounder-sa 6/no information Anomalous lanternfish-sa 1/no information Angolan flying squid-sa 6/no information Andaman lobster-sa 6/no information American conger-sa 6/no information African spadefish-sa 1/no information African forktail snapper-sa 1/no information Aconcagua grenadier-sa 6/no information Acned snake-eel-sa 1/no information Shallow-water Cape hake-sa 1/no information Sevenstar flying squid-sa 6/no information Sevenstar flying squid-sa 1/no information SEP-sa 6/no information SEO-sa 6/no information Senegalese rockfish-sa 1/no information Sea snails-sa 6/no information Seabasses nei-sa 6/no information Scup-sa 6/no information Sawback poacher-sa 6/no information Satyrichthys adeni-sa 6/no information Saposhnikovi shad-sa 6/no information Sao Paulo shrimp-sa 6/no information Sao Paulo shrimp-sa 1/no information Sandyback stingaree-sa 6/no information Salvelinus leucomaenis-sa 6/no information Saddletail grouper-sa 6/no information RZX-sa 6/no information RYO-sa 5/no information RQC-sa 6/no information Round scad-sa 6/no information Robust bobtail squid-sa 1/no information Rhinoceros leatherjacket-sa 6/no information Red king crab-sa 1/no information Red codling-sa 6/no information Red bait-sa 6/no information Razor mud shrimp-sa 6/no information RAL-sa 1/no information Raja clarkii-sa 1/no information Queensland school mackerel-sa 6/no information QAL-sa 1/no information Purple brotula-sa 6/no information PRY-sa 6/no information Precious corals nei-sa 6/no information PQD-sa 6/no information Port Jackson shark-sa 1/no information Porgies-sa 1/no information Pogonophryne spp-sa 6/no information Pink(=Humpback) salmon-sa 6/no information Pickhandle barracuda-sa 1/no information Picarels, etc. nei-sa 6/no information Peruvian weakfish-sa 1/no information Peruvian calico scallop-sa 1/no information PAP-sa 1/no information Pandalopsis shrimps nei-sa 6/no information Pacific shrimps nei-sa 5/no information Pacific seabobs-sa 6/no information Pacific rock crab-sa 6/no information Pacific dog snapper-sa 1/no information Pacific burrfish-sa 6/no information OVM-sa 6/no information Otophidium chickcharney-sa 6/no information Otophidium chickcharney-sa 1/no information Other-sa 6/no information Ostichthys acanthorhinus-sa 6/no information Oplopomus caninoides-sa 6/no information Oplopomus caninoides-sa 1/no information Opisthocentrus dybowskii-sa 6/no information Oman cuttlefish-sa 1/no information OGG-sa 6/no information OEX-sa 6/no information OCK-sa 6/no information OBX-sa 6/no information New Zealand mussel-sa 6/no information New Zealand mussel-sa 1/no information Needlefishes nei-sa 6/no information Navaga(=Wachna cod)-sa 6/no information Natal spiny lobster-sa 6/no information Nassau grouper-sa 6/no information Narrowfin smooth-hound-sa 6/no information Nansenia ardesiaca-sa 6/no information MZY-sa 6/no information Mullet snapper-sa 1/no information MTY-sa 6/no information MSQ-sa 6/no information Moray cods nei-sa 6/no information Monocle breams-sa 6/no information MOA-sa 6/no information MMY-sa 6/no information Milkfish-sa 6/no information Midway deep-sea coral-sa 6/no information Mexican spiny loster-sa 6/no information MCG-sa 6/no information McCain's skate-sa 6/no information McCain's skate-sa 1/no information Manytooth conger-sa 6/no information Malabar blood snapper-sa 6/no information Madagascar nylon shrimp-sa 1/no information LVL-sa 6/no information LTW-sa 6/no information Longsnout butterfly ray-sa 6/no information Longfin squid-sa 6/no information Longfin squid-sa 5/no information Longfin bonefish-sa 6/no information Longfin African conger-sa 6/no information LMD-sa 6/no information Liza spp-sa 6/no information Lizard mantis-sa 6/no information Lingcod-sa 1/no information Liachirus melanospilus-sa 1/no information Letholycus magellanicus-sa 6/no information Lessonia spp-sa 6/no information LDY-sa 6/no information LDL-sa 6/no information LDI-sa 6/no information Lampadena urophaos-sa 6/no information Lake sturgeon-sa 6/no information Lagocephalus wheeleri-sa 1/no information KSU-sa 1/no information Knobby bobtail squid-sa 6/no information KKW-sa 1/no information JUL-sa 6/no information January octopus-sa 6/no information Italian deep-sea shrimp-sa 1/no information Indo-Pacific slender worm-eel-sa 6/no information Indo-Pacific king mackerel-sa 6/no information Indo-Pacific king mackerel-sa 1/no information Indian bait prawn-sa 1/no information IGD-sa 6/no information ICV-sa 6/no information IAK-sa 1/no information Hottentot seabream-sa 6/no information Horse mussels nei-sa 6/no information Hooktooth shark-sa 6/no information Honnibe croaker-sa 1/no information HMJ-sa 6/no information HJK-sa 6/no information Hebrew moon-shell-sa 6/no information Hardshell shrimp-sa 6/no information Harbour spidercrab-sa 1/no information Halfspined flathead-sa 1/no information HAA-sa 6/no information Gulf toadfish-sa 6/no information Gulaphallus bikolanus-sa 6/no information Guinea shrimp-sa 6/no information Green rock lobster-sa 6/no information Green birdmouth wrasse-sa 1/no information Grayspottted guitarfish-sa 1/no information GOU-sa 6/no information Goldlined seabream-sa 6/no information Golden threadfin bream-sa 6/no information Gobitrichinotus radiocularis-sa 6/no information Gobiopsis aporia-sa 6/no information Goatfishes-sa 6/no information Goatfishes-sa 1/no information Glassy flying squid-sa 6/no information GHX-sa 6/no information GFG-sa 6/no information Garnet coral-sa 6/no information FNG-sa 6/no information FLO-sa 6/no information Flamboyant cuttlefish-sa 1/no information FJE-sa 6/no information EZA-sa 6/no information Ericara niger-sa 6/no information ERB-sa 6/no information EOW-sa 6/no information EIS-sa 6/no information EDS-sa 6/no information Dusky smooth-hound-sa 6/no information Dotted gizzard shad-sa 6/no information Donkey croaker-sa 6/no information

	Dolphinfishes nei-sa 6/no information DLN-sa 6/no information DLL-sa 6/no information Disc-
ESP-MBS-DTS-VL1824-NGI-NO-	Velvet dogfish-sa 6/no information ABP-sa 6/no information Abyssal spiderfish-sa 6/no information ACU-sa 6/no information Aequorea aequorea-sa 6/no information African forktail snapper-sa 1/no information African forktail snapper-sa 6/no information African longfin eel-sa 6/no information African spadefish-sa 1/no information AJZ-sa 6/no information Akiami paste shrimp-sa 1/no information AKQ-sa 1/no information Alabama shad-sa 6/no information American conger-sa 1/no information American conger-sa 6/no information Amur sturgeon-sa 6/no information Anchoveta(=Peruvian anchovy)-sa 6/no information Andaman lobster-sa 6/no information Angolan flying squid-sa 6/no information Angular murex-sa 1/no information Apocryptes bato-sa 5/no information Apocryptes bato-sa 6/no information AQR-sa 6/no information AQS-sa 6/no information AQV-sa 6/no information Arctic flounder-sa 1/no information Arctic flounder-sa 6/no information Argentine anchovy-sa 6/no information Argentine menhaden-sa 6/no information Argobuccinum argus-sa 5/no information ARK-sa 6/no information Armoured shrimp-sa 1/no information Arm squids nei-sa 6/no information ART-sa 6/no information ASL-sa 1/no information Atlantic menhaden-sa 1/no information Atlantic seabasses-sa 6/no information Atlantic seabob-sa 6/no information Atlantic searobins-sa 2/no information Atlantic searobins-sa 6/no information Atlantic silverside-sa 6/no information Australian bonito-sa 1/no information AYR-sa 5/no information Ayu sweetfish-sa 7/no information BAA-sa 6/no information Baikal seal-sa 6/no information Baleen whales nei-sa 6/no information Barbeled catshark-sa 5/no information Barbeled catshark-sa 6/no information Bareskin dogfish-sa 6/no information Barred grunt-sa 1/no information Bartsch's squid-sa 6/no information Bay anchovy-sa 6/no information BAY-sa 1/no information BBP-sa 6/no information Beach silverside-sa 1/no information Beach silverside-sa 6/no information Beaked whales nei-sa 5/no information Beaked whales nei-sa 6/no information Bearded croaker-sa 6/no information BEF-sa 6/no information Beka squid-sa 6/no information Belanger's croaker-sa 6/no information Benthophilus baeri-sa 1/no information Benthophilus baeri-sa 6/no information BFA-sa 1/no information BFF-sa 6/no information BHZ-sa 6/no information Biglip grunt-sa 1/no information Bigmouth skate-sa 6/no information Blackfin barracuda-sa 6/no information Blacksaddle herring-sa 1/no information Blacksaddle herring-sa 6/no information Black seabass-sa 1/no information Blacktip sawtail catshark-sa 2/no information Bleeker smoothbelly sardinella-sa 6/no information BLK-sa 1/no information BLK-sa 6/no information Blood cockle-sa 6/no information Blue mackerel-sa 1/no information Blue mackerel-sa 5/no information Blue mackerel-sa 6/no information Blue squat lobster-sa 6/no information Bobo mullet-sa 6/no information Bobo mullet-sa 7/no information Bocaccio rockfish-sa 6/no information Bonefish-sa 6/no information Bonga shad-sa 6/no information Brama spp-sa 1/no information Brama spp-sa 5/no information Brama spp-sa 6/no information Brazilian groupers nei-sa 6/no information Broadgill catshark-sa 6/no information Brownback trevally-sa 6/no information Buffalo sculpin-sa 6/no information Bull shark-sa 6/no information Burmeister's porpoise-sa 6/no information Butterfly bobtail squid-sa 6/no information BVS-sa 6/no information Bythites islandicus-sa 6/no information Cabezon-sa 1/no information Cabinza grunt-sa 6/no information Calico scallop-sa 5/no information Callinectes swimcrabs nei-sa 1/no information Cape lobster-sa 1/no information Cape rock lobster-sa 1/no information Carcharhinus sharks nei-sa 1/no information Cardinalfishes, etc. nei-sa 1/no information Cardinalfishes, etc. nei-sa 6/no information Caribbean spiny lobster-sa 2/no information Guinean barracuda-sa 1/no information Guinean barracuda-sa 6/no information Guinean striped mojarra-sa 1/no information Guinean striped mojarra-sa 6/no information Gulf herring-sa 6/no information Gulper sharks nei-sa 1/no information GYY-sa 6/no information Halfspined flathead-sa 6/no information Hapuku wreckfish-sa 6/no information Hapuku wreckfish-sa 7/no information Harbour spidercrab-sa 1/no information Harbour spidercrab-sa 6/no information HBL-sa 6/no information Hebrew moon-shell-sa 6/no information HHE-sa 6/no information HHK-sa 6/no information HJK-sa 5/no information HJK-sa 6/no information HJZ-sa 6/no information HOQ-sa 6/no information Horned murex-sa 6/no information Hottentot seabream-sa 6/no information Humming-bird bobtail squid-sa 6/no information Hydrolagus alberti-sa 6/no information Hypopterus macropterus-sa 6/no information IDA-sa 6/no information IGD-sa 6/no information IID-sa 6/no information IID-sa 7/no information Indian bait prawn-sa 6/no information Indian halibut-sa 6/no information Indian red shrimp-sa 1/no information Indian red shrimp-sa 2/no information Indonesian golden crab-sa 6/no information Indo-Pacific king mackerel-sa 6/no information Indo-Pacific king mackerel-sa 7/no information Inland silverside-sa 6/no information Intermediate bobtail squid-sa 6/no information IOO-sa 6/no information IRA-sa 6/no information Izak catshark-sa 6/no information January octopus-sa 1/no information January octopus-sa 6/no information Japanese flying squid-sa 6/no information Japanese sand shrimp-sa 1/no information Japanese sand shrimp-sa 6/no information JBI-sa 1/no information JBI-sa 6/no information JHA-sa 6/no information JKI-sa 5/no information JNX-sa 1/no information JNX-sa 6/no information Jumbo flying squid-sa 1/no information Karanteen seabream-sa 6/no information KCK-sa 5/no information KEA-sa 6/no information Keeled mud lobster-sa 6/no information KHE-sa 1/no information King weakfish-sa 1/no information KLD-sa 6/no information KLO-sa 1/no information KWH-sa 6/no information KXP-sa 6/no information LAA-sa 1/no information LAA-sa 6/no information Lampadena urophaos-sa 6/no information Lamprogrammus brunswigi-sa 6/no information Largescale flounder-sa 1/no information Largescale flounder-sa 5/no information Largescale flounder-sa 6/no information Latchet(=Sharpbeak gurnard)-sa 6/no information Lavender jobfish-sa 6/no information LDL-sa 6/no information Leaftail croaker-sa 6/no information Leaping bonito-sa 6/no information Leather bass-sa 6/no information Leopard moray eel-sa 6/no information Lesser glass shrimp-sa 1/no information Letholycus magellanicus-sa 6/no information Little bay scallop-sa 6/no information Lizard mantis-sa 1/no information Lizard mantis-sa 6/no information LMD-sa 6/no information Longfin African conger-sa 6/no information Longfin bonefish-sa 6/no information Longfin squid-sa 1/no information Longfin squid-sa 5/no information Longfin squid-sa 6/no information Longnose sawshark-sa 6/no information

	Longspine porgy-sa 6/no information Longtail skate-sa 6/no information LRZ-sa 6/no information LSE-sa 6/no information LWH-sa 6/no information LZE-sa 6/no information Madokai's cuttlefish-sa 6/no information Magellanic rockcod-sa 5/no information Magnificent cuttlefish-sa 1/no information Malabar sprat-sa 1/no information Malabar sprat-sa 5/no information Malabar sprat-sa 6/no information Mangrove red snapper-sa 6/no information Maputo conger-sa 6/no information McCain's skate-sa 1/no information McCain's skate-sa 5/no information McCain's skate-sa 6/no information Metanephrops lobsters nei-sa 1/no information Mexican spiny loster-sa 6/no information MGV-sa 6/no information Mississippi paddlefish-sa 6/no information MJA-sa 6/no information MJU-sa 6/no information MLO-sa 6/no information MMU-sa 6/no information MOA-sa 6/no information Mojarras(=Silver-biddies) nei-sa 6/no information Monocle breams-sa 1/no information Monocle breams-sa 6/no information Moray cods nei-sa 6/no information Mottled fusilier-sa 6/no information Mountain mullet-sa 6/no information Mouse catshark-sa 6/no information MTY-sa 6/no information Muddy arrowtooth eel-sa 6/no information Muddy auger-sa 1/no information Mud spiny lobster-sa 6/no information MXA-sa 6/no information Nansenia ardesiaca-sa 6/no information Nansenia ardesiaca-sa 7/no information Narrowfin smoot
ESP-MBS-DTS-VL2440-NGI-NO-	OYU-sa 6/no information GEV-sa 6/no information Giant gelidium-sa 6/no information Glassy flying squid-sa 1/no information Goatfishes-sa 1/no information Goatfishes-sa 5/no information Goatfishes-sa 6/no information ACJ-sa 6/no information ACA-sa 6/no information Yellowtip halfbeak-sa 6/no information XYX-sa 6/no information WWB-sa 6/no information Wolf-herrings nei-sa 6/no information Whitespotted smooth-hound-sa 6/no information Whitespotted guitarfish-sa 5/no information Whitefishes nei-sa 6/no information White barbel-sa 6/no information West coast seabream-sa 1/no information Wellington shrimp-sa 6/no information WAG-sa 6/no information VMC-sa 6/no information Velvet dogfish-sa 6/no information ULA-sa 6/no information UEH-sa 6/no information TWP-sa 1/no information Two-row rock shell-sa 6/no information Two-finned round herring-sa 7/no information Two-finned round herring-sa 6/no information Twobar seabream-sa 7/no information Twobar seabream-sa 5/no information Twobar seabream-sa 1/no information IAM-sa 1/no information TQZ-sa 6/no information TCB-sa 6/no information Tallfin croaker-sa 6/no information SYV-sa 6/no information Swamp ghost crab-sa 7/no information Swamp ghost crab-sa 6/no information Swamp ghost crab-sa 5/no information Striped eel catfish-sa 6/no information Steenstrup's bobtail squid-sa 7/no information Spotted eagle ray-sa 1/no information Spotted dolphins nei-sa 6/no information Spikefin goby-sa 6/no information Southern spider crab-sa 5/no information Solenocerid shrimps nei-sa 6/no information Softshell red crab-sa 6/no information Snaky klipfish-sa 6/no information Smooth nylon shrimp-sa 1/no information Smoothlip stargazer-sa 6/no information Smooth dosinia-sa 5/no information Smooth dosinia-sa 1/no information Smalltooth weakfish-sa 1/no information Slender grouper-sa 1/no information SJZ-sa 6/no information Silver-stripe round herring-sa 5/no information Silver seabream-sa 1/no information Shoulderspot grenadier-sa 5/no information Sharptooth smooth-hound-sa 1/no information SGA-sa 6/no information Sevenstar flying squid-sa 6/no information Sevenstar flying squid-sa 5/no information Serra Spanish mackerel-sa 6/no information Seabasses nei-sa 6/no information Rusty jobfish-sa 6/no information RTH-sa 6/no information RSJ-sa 6/no information RQB-sa 5/no information Round ray-sa 5/no information Rockhead-sa 6/no information RKB-sa 6/no information Rio skate-sa 6/no information Regan's anchovy-sa 6/no information Red swimcrab-sa 1/no information Red king crab-sa 1/no information Red codling-sa 6/no information Red codling-sa 1/no information Ragworm-sa 6/no information RAA-sa 6/no information RAA-sa 5/no information Queen crab-sa 6/no information QCA-sa 6/no information PQD-sa 6/no information Port Jackson shark-sa 6/no information Pomfrets, ocean breams nei-sa 6/no information Polymetme corythaeola-sa 6/no information Polkadot catshark-sa 5/no information Peacock hind-sa 5/no information Pandalopsis shrimps nei-sa 1/no information Pale toadfish-sa 5/no information Pacific herring-sa 6/no information Pacific burrfish-sa 5/no information GEC-sa 5/no information Opalescent inshore squid-sa 6/no information ONC-sa 6/no information Nototodarus flying squids nei-sa 1/no information Northern smoothtounge-sa 6/no information Northern pink shrimp-sa 1/no information NIZ-sa 6/no information NES-sa 5/no information Needle dogfish-sa 6/no information Nansenia ardesiaca-sa 6/no information MZA-sa 1/no information MYR-sa 6/no information Mouse catshark-sa 1/no information Mountain mullet-sa 6/no information Monocle breams-sa 5/no information Mojarras(=Silver-biddies) nei-sa 6/no information MOA-sa 6/no information MOA-sa 5/no information Metanephrops lobsters nei-sa 6/no information Metanephrops lobsters nei-sa 1/no information Meagres nei-sa 6/no information McCain's skate-sa 5/no information McCain's skate-sa 1/no information Mauritian sardinella-sa 6/no information Malabar grouper-sa 7/no information LQW-sa 6/no information Andaman lobster-sa 1/no information Akiami paste shrimp-sa 1/no information AGG-sa 6/no information African forktail snapper-sa 1/no information Aconcagua grenadier-sa 6/no information HXW-sa 6/no information Longfin squid-sa 6/no information Longfin African conger-sa 6/no information LOA-sa 6/no information LGS-sa 6/no information LEY-sa 5/no information Lesser glass shrimp-sa 1/no information Lesser devil ray-sa 6/no information Lake sturgeon-sa 6/no information KXX-sa 6/no information KKX-sa 6/no information KHE-sa 6/no information KEA-sa 6/no information KEA-sa 5/no information Karanteen seabream-sa 1/no information Jumbo flying squid-sa 1/no information JCH-sa 7/no information JBI-sa 5/no information Japanese sand shrimp-sa 6/no information Japanese sand shrimp-sa 1/no information January octopus-sa 1/no information Island inshore squid-sa 1/no information IOO-sa 6/no information IBA-sa 6/no information HIO-sa 6/no information HHK-sa 6/no information Hebrew moon-shell-sa 6/no information HBF-sa 5/no information Harbour spidercrab-sa 7/no information Harbour spidercrab-sa 1/no information Hapuku wreckfish-sa 5/no information Halfspined flathead-sa 6/no information Guinean striped mojarra-sa 5/no information Guinean barracuda-sa 6/no information GUF-sa 7/no information Grey bonnet-sa 2/no information Golden trevally-sa 5/no information Gobitrichinotus radiocularis-sa 5/no information Andaman lobster-sa 6/no information AQS-sa 6/no information AQT-sa 6/no information Aristeus

	shrimps nei-sa 1/no information AUD-sa 7/no information Australian bonito-sa 1/no information Australian bonito-sa 6/no information AVJ-sa 6/no information BAA-sa 6/no information Baleen whales nei-sa 6/no information Barred grunt-sa 5/no information Barred grunt-sa 6/no information Benthophiloides brauneri-sa 5/no information Benthophiloides brauneri-sa 6/no information Bicolor jack-sa 5/no information Bicolor jack-sa 6/no information Bigeye inshore squid-sa 1/no information Bigeyes nei-sa 6/no information Black corals and thorny corals-sa 5/no information Black corals and thorny corals-sa 6/no information Blackfin scad-sa 1/no information Black gemfish-sa 6/no information Blacksaddle herring-sa 6/no information Black seabass-sa 6/no information Blackspot shark-sa 6/no information Blue mackerel-sa 1/no information Bobo mullet-sa 6/no information Bocaccio rockfish-sa 6/no information Bonefish-sa 6/no information Brama spp-sa 1/no information BRK-sa 6/no information Brock's pipefish-sa 6/no information Burmeister's porpoise-sa 6/no information California lizardfish-sa 5/no information Cardinalfishes, etc. nei-sa 1/no information Caribbean reef octopus-sa 6/no information Catalonian striped shrimp-sa 6/no information Chinese icefish-sa 6/no information CIK-sa 6/no information CIK-sa 7/no information Comb shrimp-sa 6/no information Coral catshark-sa 1/no information Creole damsel-sa 6/no information Cylindrical razor shell-sa 1/no information Cylindrical razor shell-sa 6/no information Daggernose shark-sa 5/no information Daisy parrotfish-sa 6/no information Dall's porpoise-sa 6/no information Deep-water mud lobster-sa 6/no information Diadromous fishes nei-sa 6/no information Diadromous fishes nei-sa 7/no information Disc-fin squids nei-sa 6/no information Discrepant venus-sa 5/no information Dogfishes nei-sa 5/no information DSA-sa 6/no information Dusky smooth-hound-sa 1/no information ELD-sa 6/no information Equilateral venus-sa 6/no information ERB-sa 5/no information FBA-sa 5/no information Flappy snake-eel-sa 6/no information FQB-sa 5/no information FQB-sa 6/no information FXB-sa 6/no information Garibaldi damselfish-sa 6/no information GDJ-sa 6/no information
ESP-MBS-FPO-VL0612-NGI-NO-	Boa catshark-sa 1/no information Tudor's flounder-sa 6/no information Sockeye(=Red) salmon-sa 6/no information Shiba shrimp-sa 6/no information Serrulate whiptail-sa 1/no information Round scad-sa 1/no information Raja compagnoi-sa 1/no information Lenok-sa 6/no information Lake(=Common) whitefish-sa 1/no information Guntea loach-sa 1/no information Flat toadfish-sa 1/no information Flabellum cup corals nei-sa 1/no information Castaneta-sa 1/no information Butterfly fan lobster-sa 6/no information
ESP-MBS-HOK-VL0612-NGI-LLD-	West African ladyfish-sa 5/no information
ESP-MBS-HOK-VL1218-NGI-LLD-	Tiger shark-sa 6/no information Brama spp-sa 6/no information Black pomfret-sa 5/no information
ESP-MBS-HOK-VL1218-NGI-NO-	BSL-sa 6/no information Bull shark-sa 6/no information Canary rockfish-sa 6/no information Colorado snapper-sa 6/no information Daggernose shark-sa 5/no information Diadromous fishes nei-sa 6/no information Diadromous fishes nei-sa 7/no information Dolphinfishes nei-sa 6/no information Fleshfish-sa 6/no information Garnet coral-sa 6/no information Glassy flying squid-sa 9/no information Goldstripe sardinella-sa 6/no information Gurgesiella atlantica-sa 6/no information Brama spp-sa 9/no information Longfin squid-sa 6/no information McCain's skate-sa 5/no information MMI-sa 6/no information Nervous shark-sa 6/no information Nimble spray crab-sa 5/no information Nurse shark-sa 11.2/no information PBX-sa 6/no information Peacock hind-sa 5/no information Pink ear emperor-sa 6/no information RBA-sa 6/no information Red codling-sa 12/no information RTA-sa 6/no information Shango dragonet-sa 6/no information Southern bluefin tuna-sa 6/no information Spadenose shark-sa 6/no information Stout bobtail squid-sa 6/no information Western school shrimp-sa 6/no information YOM-sa 6/no information GZS-sa 6/no information Broomtail grouper-sa 6/no information BRY-sa 6/no information African forktail snapper-sa 12/no information AGG-sa 12/no information American conger-sa 5/no information American gizzard shad-sa 6/no information Argentine conger-sa 6/no information Argentine menhaden-sa 1/no information Atlantic searobins-sa 6/no information Bigthorn skate-sa 6/no information Blachea xenobranchialis-sa 6/no information Bocaccio rockfish-sa 6/no information Brama spp-sa 11.2/no information Brama spp-sa 6/no information
ESP-MBS-HOK-VL1824-NGI-LLD-	Brama spp-sa 6/no information Tiger shark-sa 5/no information Tiger shark-sa 6/no information Perinereis spp-sa 6/no information IJO-sa 5/no information
ESP-MBS-HOK-VL2440-NGI-LLD-	swo-med/assessed swo-na/assessed
ESP-MBS-PMP-VL0612-NGI-NO-	Swamp ghost crab-sa 6/no information TSA-sa 6/no information Two-finned round herring-sa 6/no information UFK-sa 6/no information UUT-sa 6/no information VFW-sa 6/no information Whitespotted smooth-hound-sa 6/no information Atlantic searobins-sa 5/no information Barbeled catshark-sa 6/no information Bifid clingfish-sa 6/no information Boa catshark-sa 6/no information BUC-sa 6/no information Canary rockfish-sa 6/no information Centrobranchus andreae-sa 6/no information Diadromous fishes nei-sa 6/no information Dwarf sawfish-sa 6/no information Finetooth shark-sa 1/no information Hooktooth shark-sa 6/no information Japanese pilchard-sa 1/no information Leopard skate-sa 1/no information Lesser devil ray-sa 6/no information Longfin squid-sa 6/no information Malabar blood snapper-sa 6/no information MUJ-sa 6/no information Nervous shark-sa 1/no information OAN-sa 1/no information Pacific sleeper shark-sa 6/no information Porgies-sa 5/no information Raja macrocauda-sa 1/no information Randall's threadfin bream-sa 6/no information Rough scad-sa 6/no information Sand smelts nei-sa 6/no information Serra Spanish mackerel-sa 5/no information Serrulate whiptail-sa 6/no information Shango dragonet-sa 5/no information

	Silver seatrout-sa 6/no information Spotted sicklefish-sa 6/no information Streaked seerfish-sa 1/no information SWD-sa 6/no information
ESP-MBS-PS-VL1218-NGI-NO-	Buccaneer anchovy-sa 1/no information Blue mackerel-sa 6/no information Blue mackerel-sa 5/no information Blue mackerel-sa 3/no information Blue mackerel-sa 1/no information Bali sardinella-sa 1/no information Australian bonito-sa 6/no information Australian bonito-sa 1/no information Atlantic menhaden-sa 6/no information Atlantic menhaden-sa 1/no information Atlantic fanfish-sa 1/no information Argentine menhaden-sa 6/no information White-edged lyretail-sa 1/no information Wels(=Som) catfish-sa 6/no information Twobar seabream-sa 1/no information Torpedo scad-sa 6/no information Stolephorus anchovies nei-sa 6/no information Spiny plunderfishes nei-sa 1/no information Spinefeet(=Rabbitfishes) nei-sa 1/no information Sawfishes-sa 1/no information Regan's anchovy-sa 1/no information Pacific ilisha-sa 1/no information Malabar sprat-sa 6/no information Malabar sprat-sa 4/no information Malabar sprat-sa 1/no information KZS-sa 1/no information King soldier bream-sa 1/no information Karanteen seabream-sa 1/no information Hemiramphus spp-sa 1/no information HBR-sa 1/no information Hapuku wreckfish-sa 1/no information Halfspined flathead-sa 1/no information Guinean barracuda-sa 6/no information Guinean barracuda-sa 1/no information Greenback horse mackerel-sa 1/no information Glassy flying squid-sa 6/no information False abalone-sa 6/no information Easter damselfish-sa 1/no information Dolly varden-sa 5/no information Diadromous fishes nei-sa 6/no information Daggerhead breams nei-sa 1/no information Abyssal spiderfish-sa 1/no information
FRA-MBS-DFN-VL0006-NGI--	sbg-gsa07/no information Mugil spp-sa 7/no information bss-gsa07/no information European eel-sa 7/no information White seabream-sa 7/no information
FRA-MBS-DFN-VL0612-NGI--	sbg-gsa07/no information Mugil spp-sa 7/no information bss-gsa07/no information Octopuses, etc. nei-sa 7/no information White seabream-sa 7/no information Surmullets(=Red mullets) nei-sa 7/no information Soles nei-sa 7/no information Spiny lobsters nei-sa 7/no information Symphodus wrasses nei-sa 7/no information swo-med/assessed Common spiny lobster-sa 8/no information Porgies, seabreams nei-sa 7/no information Cuttlefish, bobtail squids nei-sa 7/no information hke-gsa01_05_06_07/assessed hke-gsa07/assessed mon-gsa01_05_06_07/no information European eel-sa 7/no information
FRA-MBS-DTS-VL1218-NGI--	Norway lobster-sa 8/no information Deep-water rose shrimp-sa 8/no information European hake-sa 8/no information Common dab-sa 8/no information Inshore squids nei-sa 8/no information
FRA-MBS-FPO-VL0006-NGI--	European eel-sa 7/no information sbg-gsa07/no information
FRA-MBS-FPO-VL0612-NGI--	Octopuses, etc. nei-sa 7/no information European eel-sa 7/no information sbg-gsa07/no information
FRA-MBS-HOK-VL0006-NGI--	sbg-gsa07/no information bss-gsa07/no information Blackspot(=red) seabream-sa 7/no information European eel-sa 7/no information White seabream-sa 7/no information European conger-sa 7/no information Porgies, seabreams nei-sa 7/no information
FRA-MBS-HOK-VL0612-NGI--	bft-ea/no information swo-med/assessed
FRA-MBS-PGO-VL0006-NGI--	Sea urchins, etc. nei-sa 7/no information Tellins nei-sa 7/no information European eel-sa 7/no information Stony sea urchin-sa 8/no information Mediterranean mussel-sa 7/no information
FRA-MBS-PGP-VL0006-NGI--	sbg-gsa07/no information European eel-sa 7/no information bss-gsa07/no information Mugil spp-sa 7/no information
FRA-MBS-PGP-VL0612-NGI--	Octopuses, etc. nei-sa 7/no information sbg-gsa07/no information European eel-sa 7/no information bss-gsa07/no information Changeable nassa-sa 7/no information White seabream-sa 7/no information Mugil spp-sa 7/no information Soles nei-sa 7/no information
FRA-MBS-PMP-VL0006-NGI--	Sea urchins, etc. nei-sa 7/no information sbg-gsa07/no information European eel-sa 7/no information
FRA-MBS-PMP-VL0612-NGI--	sbg-gsa07/no information European eel-sa 7/no information swo-med/assessed bss-gsa07/no information Mugil spp-sa 7/no information Octopuses, etc. nei-sa 7/no information White seabream-sa 7/no information Wreckfish-sa 8/no information Spiny lobsters nei-sa 7/no information
HRV-MBS-HOK-VL1218-NGI--	bft-ea/no information swo-med/assessed
ITA-MBS-DTS-VL1218-NGI--	ctc-gsa17_18/assessed nep-gsa17_18/assessed dps-gsa17_18_19/assessed mts-gsa17_18/assessed Horned octopus-sa 18/no information mts-gsa17/assessed mut-gsa17_18/assessed Blue and red shrimp-sa 19/no information dps-gsa09_10_11/assessed Common cuttlefish-sa 16/no information ars-gsa18_19/no information tgs-gsa17/assessed hke-gsa17_18/assessed hke-gsa17_18_stecf/assessed dps-gsa12_13_14_15_16/assessed European squid-sa 16/no information ars-gsa09_10_11/assessed European squid-sa 18/no information Gilthead seabream-sa 18/no information mut-gsa09/assessed nep-gsa09/assessed European squid-sa 9/no information Broadtail shortfin squid-sa 18/no information European squid-sa 17/no information Musky octopus-sa 17/no information hke-gsa09_10_11/assessed Caramote prawn-sa 18/no information hke-gsa19/assessed mur-gsa09/no information Whiting-sa 17/no information Musky octopus-sa 18/no information Horned octopus-sa 9/no information sol-gsa17/assessed Common octopus-sa 16/no information ara-gsa09/no information Broadtail shortfin squid-sa 17/no information Common octopus-sa 9/no information Blackbellied angler-sa 18/no information Surmullet-sa 11/no information ara-gsa09_10_11/assessed Atlantic mackerel-sa 17/no information Surmullet-sa 16/no

	information hke-gsa12_13_14_15_16/assessed Marine fishes nei-sa 17/no information Caramote prawn-sa 9/no information Musky octopus-sa 16/no information Norway lobster-sa 16/no information Common octopus-sa 11/no information Common cuttlefish-sa 9/no information Broadtail shortfin squid-sa 9/no information Norway lobster-sa 19/no information mut-gsa19/assessed Atlantic horse mackerel-sa 16/no information Common octopus-sa 10/no information mut-gsa10/assessed Midsize squid-sa 17/no information Giant red shrimp-sa 16/no information
ITA-MBS-DTS-VL1824-NGI--	dps-gsa12_13_14_15_16/assessed tgs-gsa17/assessed mut-gsa17_18/assessed nep-gsa17_18/assessed ars-gsa09_10_11/assessed dps-gsa17_18_19/assessed dps-gsa09_10_11/assessed hke-gsa17_18_stecf/assessed hke-gsa17_18/assessed ctc-gsa17_18/assessed Musky octopus-sa 17/no information mts-gsa17_18/assessed hke-gsa09_10_11/assessed ara-gsa09_10_11/assessed mut-gsa09/assessed mts-gsa17/assessed Broadtail shortfin squid-sa 17/no information ars-gsa18_19/no information Horned octopus-sa 9/no information nep-gsa09/assessed sol-gsa17/assessed Giant red shrimp-sa 16/no information Blackbellied angler-sa 17/no information Caramote prawn-sa 9/no information swo-med/assessed mur-gsa09/no information ane-gsa09_10_11/assessed hke-gsa12_13_14_15_16/assessed Norway lobster-sa 16/no information European squid-sa 9/no information Common octopus-sa 9/no information Whiting-sa 17/no information Blue and red shrimp-sa 19/no information Horned octopus-sa 18/no information Common cuttlefish-sa 9/no information mut-gsa10/assessed ara-gsa09/no information European squid-sa 17/no information hke-gsa09/no information Marine molluscs nei-sa 17/no information Common octopus-sa 16/no information Broadtail shortfin squid-sa 9/no information Common cuttlefish-sa 16/no information Atlantic mackerel-sa 17/no information Horned octopus-sa 17/no information Surmullet-sa 16/no information European squid-sa 11/no information Tub gurnard-sa 9/no information Tub gurnard-sa 17/no information Common cuttlefish-sa 10/no information Blackbellied angler-sa 18/no information Spottail mantis squillid-sa 9/no information Surmullet-sa 11/no information
ITA-MBS-HOK-VL1218-NGI--	swo-med/assessed bft-ea/no information alb-med/no information hke-gsa17_18/assessed hke-gsa17_18_stecf/assessed hke-gsa09_10_11/assessed Silver scabbardfish-sa 19/no information Silver scabbardfish-sa 10/no information
ITA-MBS-HOK-VL1824-NGI--	swo-med/assessed alb-med/no information bft-ea/no information
ITA-MBS-PGP-VL0612-NGI--	ctc-gsa17_18/assessed hke-gsa09_10_11/assessed Common octopus-sa 11/no information Changeable nassa-sa 17/no information sol-gsa17/assessed Gilthead seabream-sa 17/no information Donax clams-sa 9/no information swo-med/assessed Common octopus-sa 18/no information hke-gsa19/assessed Gilthead seabream-sa 9/no information Common cuttlefish-sa 16/no information Common cuttlefish-sa 19/no information Common spiny lobster-sa 11/no information mts-gsa17_18/assessed Common cuttlefish-sa 9/no information Broadtail shortfin squid-sa 10/no information Common octopus-sa 10/no information Common cuttlefish-sa 10/no information European anchovy-sa 19/no information Common octopus-sa 9/no information Transparent goby-sa 10/no information Transparent goby-sa 9/no information Blackbelly rosefish-sa 11/no information Common octopus-sa 19/no information Common cuttlefish-sa 11/no information Big-scale sand smelt-sa 17/no information Silver scabbardfish-sa 10/no information European seabass-sa 17/no information mts-gsa17/assessed Surmullet-sa 16/no information Surmullet-sa 10/no information Common spiny lobster-sa 16/no information Mullets nei-sa 17/no information Greater amberjack-sa 19/no information Common pandora-sa 10/no information Frigate and bullet tunas-sa 10/no information Common spiny lobster-sa 19/no information mut-gsa19/assessed hke-gsa12_13_14_15_16/assessed Greater amberjack-sa 10/no information Picarel-sa 16/no information Common dolphinfish-sa 10/no information Marine crabs nei-sa 17/no information Sand steenbras-sa 17/no information Blackbelly rosefish-sa 19/no information ane-gsa09_10_11/assessed Atlantic bonito-sa 19/no information mur-gsa09/no information Common octopus-sa 16/no information Sand steenbras-sa 9/no information hke-gsa09/no information European seabass-sa 9/no information Wrasses, hogfishes, etc. nei-sa 16/no information Sand steenbras-sa 10/no information Little tunny(=Atl.black skipj)-sa 19/no information Bogue-sa 10/no information Mediterranean mussel-sa 17/no information Picarels nei-sa 10/no information Marine fishes nei-sa 17/no information Red porgy-sa 11/no information Common sole-sa 18/no information Atlantic bonito-sa 10/no information European pilchard(=Sardine)-sa 19/no information Blackbelly rosefish-sa 10/no information Blackbelly rosefish-sa 16/no information Surmullet-sa 11/no information Gobies nei-sa 17/no information hom-gsa09_10_11/assessed Wrasses, hogfishes, etc. nei-sa 10/no information Silver scabbardfish-sa 9/no information
ITA-MBS-PGP-VL1218-NGI--	swo-med/assessed Rudderfish-sa 9/no information bft-ea/no information Common spiny lobster-sa 11/no information Striped soldier shrimp-sa 17/no information hke-gsa09_10_11/assessed Silver scabbardfish-sa 9/no information Common octopus-sa 11/no information hke-gsa09/no information Striped soldier shrimp-sa 10/no information Transparent goby-sa 9/no information sol-gsa17/assessed Red porgy-sa 11/no information Common sole-sa 9/no information Smooth-hound-sa 17/no information Rudderfish-sa 11/no information Blackbelly rosefish-sa 11/no information ane-gsa09_10_11/assessed Black seabream-sa 11/no information Common cuttlefish-sa 19/no information Mediterranean mussel-sa 17/no information Common cuttlefish-sa 11/no information Common spiny lobster-sa 16/no information Changeable nassa-sa 17/no information Common spiny lobster-sa 9/no information
ITA-MBS-PGP-VL1824-NGI--	swo-med/assessed bft-ea/no information
MLT-MBS-HOK-VL1218-NGI--	swo-med/assessed bft-ea/no information Common dolphinfish-sa 15/no information Red scorpionfish-sa

	15/no information Red porgy-sa 15/no information
MLT-MBS-HOK-VL1824-NGI--	swo-med/assessed alb-med/no information
MLT-MBS-PGP-VL0612-NGI--	swo-med/assessed bft-ea/no information Silver scabbardfish-sa 15/no information Red porgy-sa 15/no information alb-med/no information Common dolphinfish-sa 15/no information

Annex IV - Contract report Bio Indicators

Biological Indicators provided for "Balance/Capacity" STECF Working Group

CONTRACT STECF n. 2062

Jérôme Guitton

July 2020

Table des matières

Terms of Reference

A) In line with the findings and recommendations of STECF EWG 19-13 and PLEN 19-03 regarding 'Balance/capacity', the expert is required to calculate newly proposed indicators and provide, where possible, his/her assessment regarding their robustness, sensitivity, easy and unambiguous calculation. With a view to the testing of the indicators through simulation as well as for typical situations in Area 27, Area 37, long distance fleets and outermost regions the indicators to be calculated are:

- Number of overfished stocks (NOS)
- Economic dependency indicator (EDI)
- Number of stocks at risk (NSR)
- Sustainable harvest indicator (SHI)
- Restricted Sustainable harvest indicator (SHI_R)

In order to prepare for a possible future use of FDI data instead of from AER data (for example with regards to catch data instead of landings), indicators based on FDI data should be calculated for at least one year of data and compared with results using AER data, at least in terms of fleet segment comparability.

B) The expert will calculate the SAR indicator using an updated list of stocks-at-risk as input data provided by another expert, Ms Armelle Jung (armelle.jung@desrequinsetdeshommes.org), with the calculation methods used in 2018/2019. The expert is also required to compile the balance capacity - indicator table as well as develop a common database with the information required for the calculation of the SAR and SHI indicators.

Calculations

- *Data sources*

For all the bio-indicator calculation, we need three sources of information:

The fleet catches (Values and weight): so the calculation will be data dependent. Most of the issues are wrong aggregation level, bad definition of species(as Marine fishes nei), wrong declaration of fishing area ....

The stocks assessment outputs (F_{year}/F_{msy}) collected from relevant RFMO's : for this sources of data, the main difficulties are too find the where is located the good information (in which report) and extract time series of F. We also need to find the right definition of stock (for some, the definition of the stock and the spatial declaration of the data are not coherent. Nephrops stocks by example are defined in a thinnest spatial area than in the catches data. (Fisheries Unit – FU instead of FAO sub division)

The Stock at risk list: the list is initiate from an ad hoc contract, shared, and validate during the preliminary Working Group.

- *Number of overfished stocks (NOS)*

Definition (STECF 15-02 pp. 141-147)**:**

The NOS essentially indicates the number of stocks for which the ratio of F/FMSY is greater than 1.0 (i.e. stocks that at a particular point in time are being fished at rates that are not consistent with MSY) that are exploited by a fleet segment, provided that the catch of that fleet segment account for more than n%[32] of the total catches from that stock by all segments. This means that if a fleet segment takes a catch from a stock for which F/FMSY is greater than 1.0, but that catch, represents less than or equal to n% of the total catches from that stock, stock would not be counted in deriving the indicator value for the fleet segment.

Threshold: if a fleet segment takes more than n% of its catches from a stock for which the ratio of F/FMSY is greater than 1.0, that stock should be included for the purposes of calculating the NOS indicator value.

The n% threshold, could be

- fixed for all the stocks to highlight high fishing mortality fleet contributor ie (Fleet NOS take into account all stocks for which the Fishing mortality due to the fleet is over 10%) -

- an arbitrary threshold aimed to eliminate fleet segments that catch very low levels of the stocks in question. N is expressed as 1 / Number of fleet segments. e.g if the number of fleet segment is 100 the Threshold percentage would be 1%. If the number of fleet segments is 10, then the threshold would be 10%. (as suggested in the report)

Calculation algorithm:

1-Join catches (weight) by fleet with Stocks F_{year}/F_{msy} values

2- Sum catches of stocks by year and fleets -> $C_{stock,fleet}$

3- For Each Year,Stocks

- count number of fleets harvesting the stock → $Threshold_{year,fishstock}=1/N(fleets)$
- sum catches of Stocks by year -> C_{stock}

4- By year,Fleet, count the number of oversfished fishstock (F_{year}/F_{msy} >1) for which ($C_{stock,fleet}/C_{stock}$) > 10%

4bis - By year,Fleet, count the number of oversfished fishstock (F_{year}/F_{msy} >1) for which ($C_{stock,fleet}/C_{stock}$) >= $Threshold_{year,fishstock}$

Sample (for one year):

Table 1 (Algorithm 1-2)

Fleet	Stocks	Catches (Tons)	F/Fmsy
A	S1	10	1.1
	S2	10	1.6
	S3	10	0.8
B	S1	30	1.1

	S2	5	1.6
	S4	20	1.4

Table 2 (Algorithm 3)

Stock	Total Catches	Threshold (1/N(fleet))
S1	40	0.5 (1/2)
S2	15	0.5 (1/2)
~~S3~~ The stock S3 is not kept as F/Fmsy <1	~~10~~	~~1 (1/1)~~
S4	20	1 (1/1)

Table 3 (Algorithm 4)

Fleet	Stocks	C_{Fleet}/C_{total}	Stock filter	NOS
A	S1	10/40=0.25	1 (0.25>=0.1)	2
	S2	10/15=0.66	1 (0.66>=0.1)	
	S3 (F/Fmsy<1)			
B	S1	30/40=0.75	1 (0.75>=0.1)	3
	S2	5/15=0.33	1 (0.33>=0.1)	
	S4	20/20=1	1 (1>=1)	

Table 4 (Algorithm 4bis)

Fleet	Stocks	C_{Fleet}/C_{total}	Stock filter	NOS
A	S1	10/40=0.25	0 (0.25<=0.5)	1
	S2	10/15=0.66	1 (0.66>=0.5)	
	S3 (F/Fmsy<1)			
B	S1	30/40=0.75	1 (0.75>=0.5)	2
	S2	5/15=0.33	0 (0.33<=0.5)	
	S4	20/20=1	1 (1<=1)	

- *Economic dependency indicator (EDI)*

Definition (STECF 15-02 pp. 141-147)**:**

The EDI essentially indicates what proportion of the landings value from a fleet segment is derived from stocks for which the ratio of F/F_{MSY} is greater than 1.0 (i.e. stocks that at a particular point in time are being fished at rates that are not consistent with MSY).

The EDI represents the cumulative proportion of the revenue from such stocks to that fleet segment. The indicator can be used to inform on how reliant a particular fleet segment is on the revenue obtained from stocks that are being exploited at a rate that is not consistent with MSY. As with other indicators used in this report, the EDI cannot be used in isolation to indicate that fleet capacity is not in balance with available fishing opportunities.

Threshold: if a fleet segment takes catches from a stock for which the ratio of F/F_{MSY} is greater than 1.0, the landings value of the segment's catches from that stock should be included for the purposes of calculating the EDI indicator value.

Calculation algorithm:

1-Join catches (values) by fleet with Stocks F_{year}/F_{msy} values

2- Sum catches of fleet by year $C_{fleet,year}$

3- Filter data on stocks overfished → Sum catches of stocks by year and fleets -> $CO_{fleet,year}$

4- EDI= 100* $CO_{fleet,year}/C_{fleet,year}$

Sample (for one year):

Table 1 (Algorithm 1)

Fleet	Stocks	Catches (euros)	F/Fmsy
A	S1	10	1.1
	S2	10	1.6
	S3	10	0.8
B	S1	30	1.1
	S2	5	1.6
	S4	20	1.4

Table 2 (Algorithm 2)

Fleet	Total Catches
A	30
B	55

Table 3 (Algorithm 3)

Fleet	Stocks	Catches (euros)	CO (Catches of overfished stocks)
A	S1	10	20
	S2	10	
	~~S3~~	~~10~~	
B	S1	30	55
	S2	5	
	S4	20	

Table 4 (Algorithm 4)

Fleet	EDI
A	20/30=66%
B	55/55=100%

- *Sustainable harvest indicator (SHI)*

Definition (STECF 15-02 pp. 141-147)**:**

According to 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_i / F_{msy} > 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 fleet 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, F_i is the fishing mortality available for stock i from scientific assessments (e.g. ICES, STECF, GFCM, ICCAT, IOTC advice) and V_i is the value of landings from stock i.

Calculation algorithm:

1-Join catches (values) by fleet with Stocks $F_{year,stock}/Fmsy_{,stock}$ values

2- Sum catches of fleet by year $C_{fleet,year}$

3- Sum $(F_{year,stock}/F_{msy,stock})*C_{fleet,year,stock}$ =

4- For each Fleet/Year SHI= $\frac{\sum_{i=1}^{i=n} V_i \frac{F_i}{Fmsy_i}}{\sum_{i=1}^{i=n} \sum V_i}$

Sample (for one year):

Table 1 (Algorithm 1)

Fleet	Stocks	Catches (euros)	F/Fmsy
A	S1	10	1.1
	S2	10	1.6
	S3	10	0.8
B	S1	30	1.1
	S2	5	1.6

	S4	20	1.4

Table 2 (Algorithm 2)

Fleet	Total Catches
A	30
B	55

Table 3 (Algorithm 3)

Fleet	Stocks	Catches (euros)	SHI
A	S1	10	(10*1.1+10*1.6+10*0.8)= 35
	S2	10	
	S3	10	
B	S1	30	(30*1.1+5*1.6+20*1.4)= 69
	S2	5	
	S4	20	

Table 4 (Algorithm 4)

Fleet	SHI
A	35/30=1.16
B	69/55=1.25

- *Restricted Sustainable harvest indicator (SHIR)*

Definition:

The SHIr (Restricted SHI) has nearly the same definition as the SHI expect that SHIr is only calculate on overfished stocks (Stocks with $F_{year}/F_{msy}>1$). This indicator was proposed to avoid compensation effect when a fleet harvest overexploited and non-overexploited stocks.

Calculation algorithm:

1-Join catches (values) by fleet with Stocks $F_{year,stock}/Fmsy_{,stock}$ values

2- Sum catches of fleet by year $C_{fleet,year}$

3- Sum, for overfished stock ($F_{year}/F_{msy}>1$) $(F_{year,stock}/F_{msy,stock})*C_{fleet,year,stock}$

4- For each Fleet/Year SHIr= $\frac{\sum_{i=1}^{i=n} V_i \frac{F_i}{Fmsy_i}}{\sum_{i=1}^{i=n} \sum V_i}$

Sample (for one year):

Table 1 (Algorithm 1)

Fleet	Stocks	Catches (euros)	F/Fmsy
A	S1	10	1.1
	S2	10	1.6
	~~S3~~	~~10~~	~~0.8~~
B	S1	30	1.1
	S2	5	1.6
	S4	20	1.4

Table 2 (Algorithm 2)

Fleet	Total Catches of overfished stock
A	20
B	55

Table 3 (Algorithm 3)

Fleet	Stocks	Catches (euros)	SHI
A	S1	10	(10*1.1+10*1.6)=

	S2	10	27
	~~S3~~	~~10~~	
B	S1	30	(30*1.1+5*1.6+20*1.4)= 69
	S2	5	
	S4	20	

Table 4 (Algorithm 4)

Fleet	SHI
A	27/20=1.35
B	69/55=1.25

- *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 that are biologically vulnerable are being affected by the activities of the fleet segment, 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 EU fleets 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 Blim;

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 a 56 56 international advisory body, even where such advice is given on a datalimited basis;

c) subject to a fishing opportunities regulation which stipulates that the fish should be returned to the sea unharmed or that landings are prohibited;

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

A list of Stock at Risk is provided by Armelle Jung and checked/validated during the preliminary working group. This list is a little bit particular because it's composed of quantitative results (criteria a or d) and quantitative one (through report analysis for criteria b,c)

Calculation algorithm:

1-Join catches (weigth) by fleet with Stocks at Risk list

2- Sum catches of fleet by year $C_{fleet,year}$

3- Sum catches o $C_{stock,year}$ for stock tagged as risk

4- For each Fleet, calculate the proportion of catches by Stock at Risk $C_{stock,fleet,year}/C_{fleet,year}$ =P1

5- For each Fleet, calculate the proportion of the catches of the stock due to the fleet over the total catches made on the stock $C_{stock,fleet,year}/C_{stock,year}$= P2

6- For Each fleet, count the number of Stock at Risk with P1 or P2 >0.1, and store for each selected stock the criteria

Sample (for one year):

Table 1 (Algorithm 1)

Fleet	Stocks at risk	Catches (Tons)	Criteria
A	S1	10	A
	S2	10	B
	S3	10	B
B	S1	30	A
	S2	5	B
	S4	20	A

Table 2 (Algorithm 2)

Fleet	Total Catches of the fleet
A	30
B	55

Table 3 (Algorithm 3)

Stocks at risk	Total Catches of the stock
S1	40
S2	15
S3	10
S4	20

Table 4 (Algorithm 4)

Fleet	Stocks at risk	Proportion P1	Criteria
A	S1	10/30=0.33	A
	S2	10/30=0.33	B
	S3	10/30=0.33	B
B	S1	30/55=0.54	A
	S2	5/55=0.09	B
	S4	20/55=0.36	A

Table 4 (Algorithm 4)

Fleet	Stocks at risk	Proportion P2	Criteria
A	S1	10/40=0.25	A
	S2	10/15=0.66	B
	S3	10/10=1	B
B	S1	30/40=0.75	A
	S2	5/15=0.33	B
	S4	20/20=1	A

Table 5 (Algorithm 4)

Fleet	Stocks at risk selected	Selection	Criteria	SAR
A	S1	P1 /P2	A/B/B	3
	S2	P1/P2		

	S3	P1/P2		
B	S1	P1/P2	A /B /A	3
	S2	P1		
	S4	P1/P2		

- *Number of stocks at risk (NSR)*

The Number of Stock At Risk Indicator is derived from SAR. As there was a lot of discussion and subjectivity on quantitative selection of stock at risk, the idea of a quantitative Stock at risk comes up. This NSR has the same definition of the SAR except that the list is only based on criteria a.

Calculation algorithm:

1-Calculate Sar

2- Count Stock at risk in the Sar with criteria a

Sample (for one year):

Table 1: Sar Result

Fleet	Stocks at risk selected	Selection	Criteria	SAR
A	S1	P1 /P2	A/B/B	3
	S2	P1/P2		
	S3	P1/P2		
B	S1	P1/P2	A /B /A	3
	S2	P1		
	S4	P1/P2		

Table 2: NSR calculation

Fleet	Criteria	NSR
A	A/B/B	1
B	A /B /A	2

Indicators Assessment

- *Preliminary comments*

Before assessing the indicators, we can have a brief overview of the inputs used for the calculation. Most of the issues to collect these inputs has been highlighted in previous Balance/opportunity reports.

Key point: Indicators give a way to analyze fishing activity; they are not summarizing this fishing activity. That means that one or two indicators are not able to resume a fleet activity (regarding Economic **and** Biologic aspect). They should be promote as a common way to describe fleet activity at the European level in order to permit comparison between European Fleets but it's too ambitious to use only two of them to characterize impact of fishing activity. "*none of the indicators used in isolation are reliable indicators*" (STECF19-13 p11-12)

In 2010, during an Ecosystem STECF working group about 30 indicators were selected to describe fishing activity. Only two of them were used for the EMFF (SHI and SAR).

- *Inputs*

F/Fmsy values:

Sometimes, it is tricky to find these values in reports. Some RFMOs are providing web services to collect the data as ICES but most of them are just publishing reports and we need to find and gather the information. This job is done during the preliminary working group when it cannot be automate. This data gathering needs to done by biologist, as sometimes we need to find the values in detailed reports.

The Stock Assessment parameter are collected in July (stock assessment WG, for GFCM and ICES RFMOs usually occur in May/June. That means that STECF indicator calculation and national calculation do not used the same inputs (the national report has to be delivered about January).

One issue is also that the stocks assessment is validate because it is under the umbrella of an official RFMOs. Stocks assessments made at a national level (Great Alantic Scallop by example) are not included in the STECF calculation (but could be used by the National one).

One proposal could be to share this list with member states and to make it more collaborative.

Stock at Risk List:

First, the qualitative criteria, the main issue is to build consensus on tagged stocks. Currently, a draft of the list is delivered through an ad hoc contract. During the preliminary working group, one expert from each major RFMO check this list but the list used at the national level could differ a lot with this one.

One proposal could be to share this list with Member states and to make it more collaborative.

Catches:

Each Member state provide catches data (weight and values) and some inconsistency remain years after years. The indicators quality is mainly due to the quality of the inputs data provided.

Joining species catches to stocks needs preliminary calculation and some hypothesis. Such commercial species, not well determined, could be rely to two stocks. Classical example is the monkfish and anglerfish that are often mixed as the same commercial fish. In order to rely those species to a stock

we use a splitting value (describe in STECF report). Maybe the calculation of these splitting values could be improved. Actually, the splitting value is based on the scientific data used for the stocks assessment; it is a ratio between the two stocks landings data (on all the time serie)

- *Ouputs*

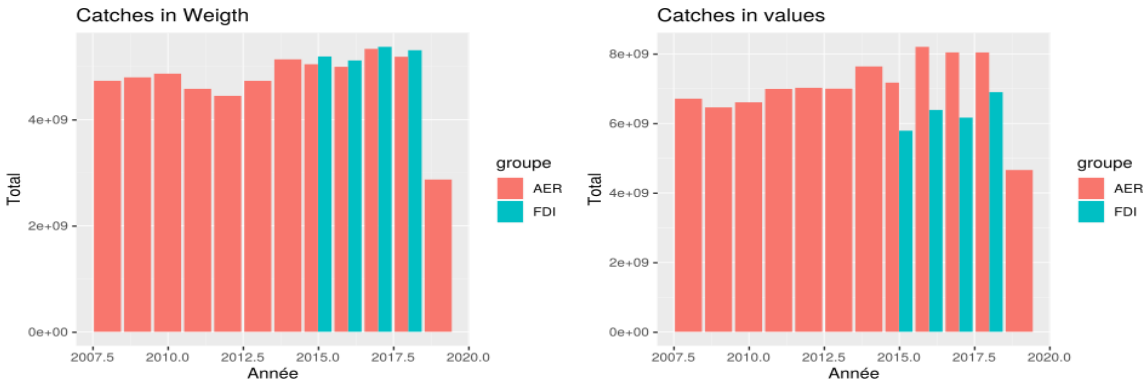
Indicator	Robustness	Sensitivity	Easy and unambiguous calculation
NOS	The indicator could be considered as robust when fleets are harvesting many stocks, but most of the times the NOS values for a fleet is highly dependent of few stocks. The threshold to define the limit for the Fishing Partial mortality due to the Fleet is important. The more this value is high, the less the stocks are selected	The indicator is based on the F/Fmsy values and the sensitivity is very high when the F/Fmsy is about one (just below or just over). But a contrario, the sensitivity is very low when the stock is highly overexploited or just at the limit (F/Fmsy=8 or F/Fmsy=1.001)	The threshold used to consider that a stock could be include in the NOS. (10% of the landings weight of the fleet of N% of the catches of the stocks) is not really defined. It was suggested N to be 1/Number of fleet but that means the fleet aggregation needs to be consistent through member state. Moreover, when some member states are not providing their data, the NOS of the fleets of the other countries are increasing. Another issue for this threshold is that the number of fleet could be high because it take into account fleets that are rarely landing the concerned stock.
EDI	This indicator is robust if the fleet aggregation is consistent over the time.	The indicator is based on the F/Fmsy values and the sensitivity is very high when the F/Fmsy is about one (just below or just over)	This indicator is easy to calculate and easy to understand or to explain. The proportion of the revenue concerned by overfished stocks. The main issue of this indicator is that we consider on the same way a stock lowly or highly overexploited.
SHI	The indicator is robust as there is no threshold effect on the overfished or not consideration. The F/Fmsy value is continues along 0-Inf	The indicator is not really sensitive (same reason as robustness)	This indicator is easy to calculate but it's a little bit tricky to explain, mainly for two reasons: - It's unusual to mix two values, one coming from Biological assessment and the other from revenue - This indicator is an average of the stocks status, so when a fleet harvest in average more stocks that in a good shape that stocks that are overexploited it could be considered as balance with the fishing opportunities, even if it harvests a high level of overfished stock.
SHIr	This indicator is robust if the fleet aggregation is consistent over the time	The indicator is based on the F/Fmsy values and the sensitivity is very high when the F/Fmsy is about one (just below or just over)	This indicator, compared to the SHI, is easier to explain because we avoid compensation effect. We still have the same comment on the mix between biological value and economic one.
SAR	The indicator is robust as it's only a count of selected species	The indicator, when the stock at risk are tagged is not sensitive.	The big issue, but the big quality of this indicator is to use qualitative information. It remains a good idea but, to be agreed by all the users, the list has to be collaboratively agreed and highly documented.

			The Threshold of 10% (of the fleet catches or of the stock catches) to select the stock seems to be understandable.
NSR	Idem as Sar	Idem as Sar	This qualitative indicator based on Blim is less criticized compared to the SAR as it is based on quantitative value. But few stocks are tagged and we miss all the stocks for which a quantitative assessment is not available (lack of data or market for these stocks)

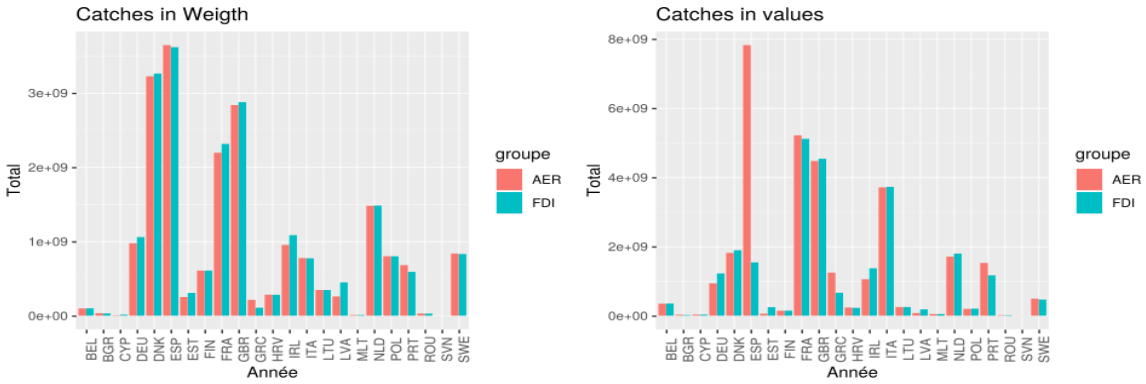
Using FDI data for calculation

DG Mare asked also for a comparison between FDI and AER data to calculate the indicators. I used both sources to calculate the same indicators. Here are the results.

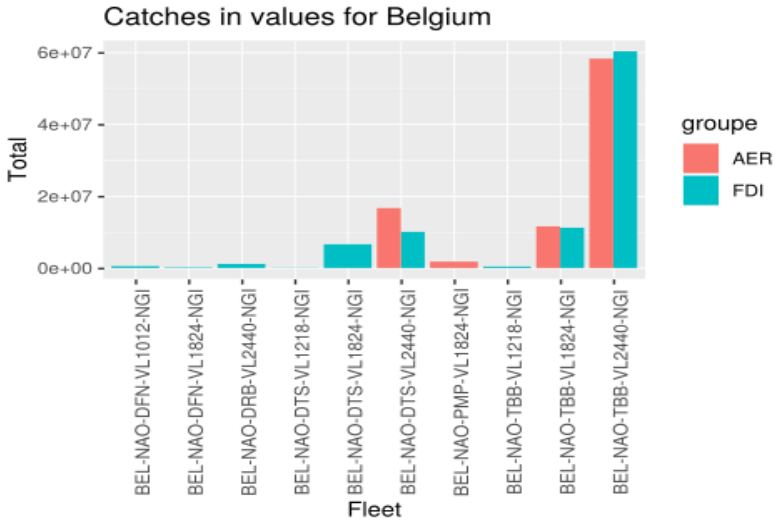
- *Global comparison of the two time series*



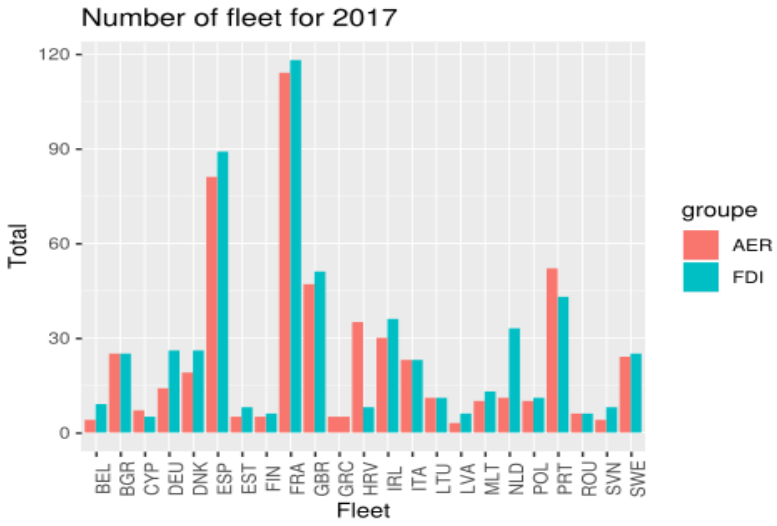
- *Comparison by countries for 2015-2018*



- *Focus on Belgium Fleets*



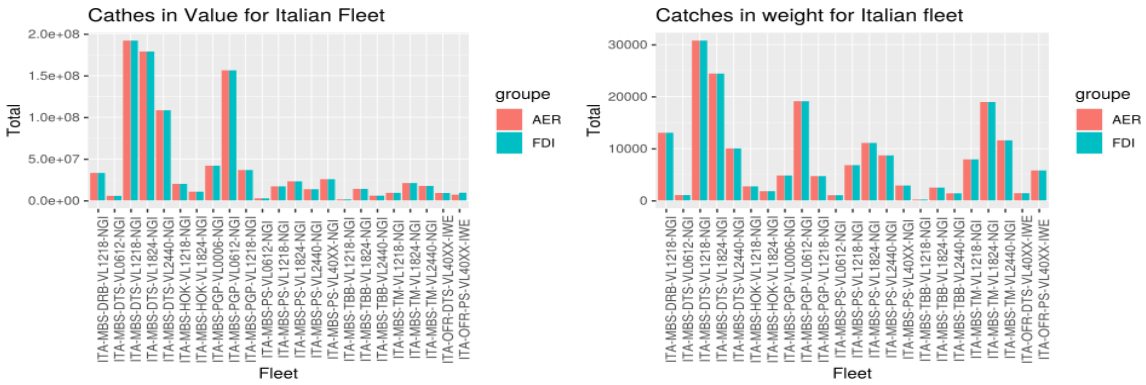
This graph highlights the fleet segmentation that could differs between the two data sources. This is problematic if Economic indicators are calculated a very different fleet segmentation than FDI for stratification reason. It has to be clarified with Member state that segmentation needs to be consistent along the time series and between FDI and Economic indicators.



Number of fleet classification for 2017 for each data provider.

This graph indicates that number of fleet segmentation could differ in each data sources.

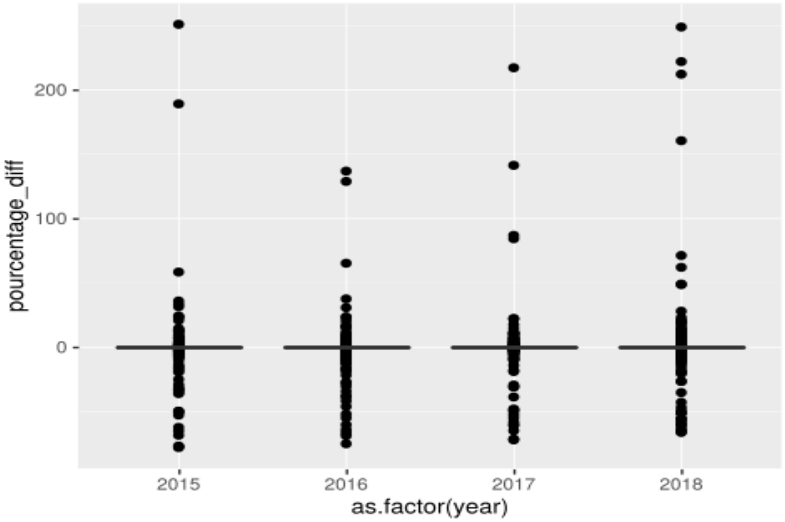
It also highlights that for Italy the number of fleets seems to be the same and we can go deeper in detail for the comparison of calculation for Italian fleet in 2017



Except for ITA-OFR-PS-VL40XX-IWE data seems to be similar.

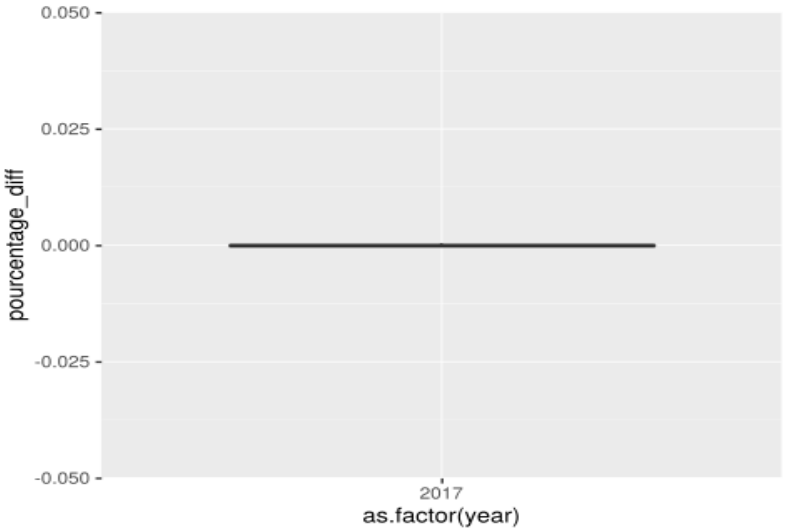
- *Comparison Fleet by Fleet by years for SHI*

For each Fleet and year, I have a SHI calculation made with FDI (FDI.shi) or with AER (AER.shi) data. For each Year and fleet, I calculate (AER.shi-FDI.shi)/Fdi.shi as a percentage of difference between the two values.



Percentage of discrepancy of SHI value from AER or FDI for all available fleets.

- *Focus on Italian fleets*

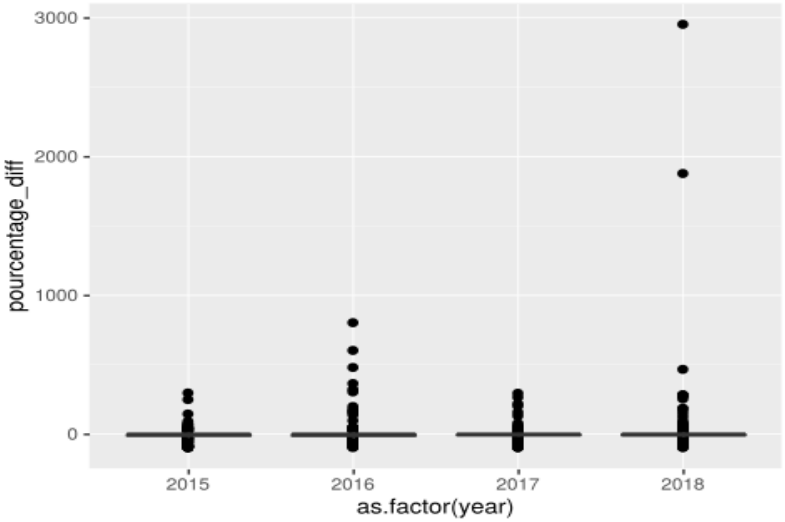


Percentage of discrepancy of SHI value from AER or FDI for Italian fleet in 2017.

Conclusion: FDI and AER data does not differ on both sources, so the calculation produce the same results

- *Comparison Fleet by Fleet by years for EDI*

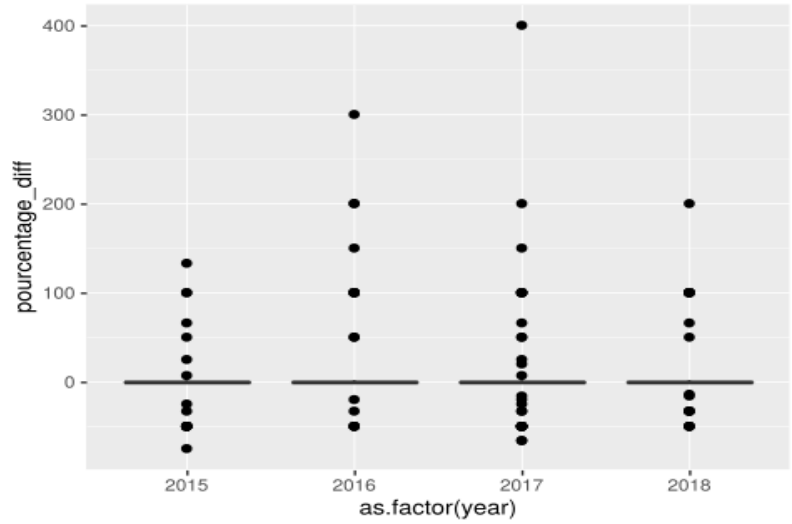
For each Fleet and year, I have a EDI calculation made with FDI (FDI.edi) or with AER (AER.edi) data. For each Year and fleet, I calculate (AER.edi-FDI.edi)/Fdi.edi as a percentage of difference between the two values.



Percentage of discrepancy in EDI values with all the fleet segment

- *Comparison Fleet by Fleet by years for SAR*

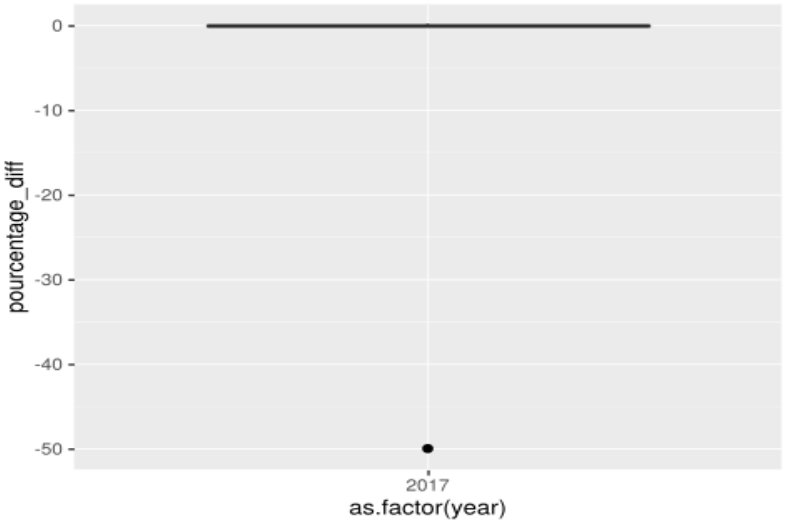
Sar is calculate using landing weight. Using FDI data could allow the calculation to be based on catches (landings+Discards).



Percentage of discrepancy in Sar values with all the fleet segment

Is there a difference using discards or not for SAR calculation? I have done the percentage of difference in Sar values the fleets, using the discards or not and there is no difference between the two calculation. Maybe one explanation could be that discards data are provided mainly for commercial species and not for Stock at risk.

- *Focus on Italian fleets*



Percentage of discrepancy in Sar values with Italian fleet segment in 2017

One fleet differs: ITA-MBS-PGP-VL0612-NGI.

fleet_code	year	interpretation	stocks_at_risk	Sar	interpretation	stocks_at_risk	sar
		Data source AER			Data source FDI		
ITA-MBS-PGP-VL0612-NGI	2017	Fishing mortality on the stock due to the Fleet >10	por-med	1	Fishing mortality on the stock due to the Fleet >10/Fishing mortality on the stock due	por-med/Swordfish	2

	to the Fleet >10

Using FDI data the sar value for the specific fleet is 2 because swordfish is considered as stock at risk and the fishing mortality on the stock due to the fleet is more than 10%. The threshold is the landing weight of the fleet divided by the landings of all European fleet harvesting the stock. There is no discrepancy between the two sources for Italian Fleet but the difference is in the total catches of the stock declared by other countries. Especially in FDI data, Greece did not provide information (available in AER). Therefore, the Partial fishing mortality of Italian fleets increase due to the lack of data provided by other member states. This is an explanation of the difference between the two values using both data sources.

- *Conclusion*

We can calculate the indicators either with FDI or AER data. Normally the data should be the same as they are both coming from DCF. If they differ, the indicators also differ.

The big difference I guess between the two-time series is that with FDI, we should be able to include Discards and that should be a big improvement especially for indicators based on weight.

Focus on indicators by Area (27, 37 and OFR) and for Outermost Region

The calculability and the reliability of the biological indicators for each big area is mainly data dependent:

5- We need knowledge on stocks and more precisely, Fishing mortality and Fmsy (A stock could be assessed without providing F/Fmsy) and secondly we need RFMos to validate the quality of the assessment. Concerning Fishing area where European fleets operate, area 27, with the long-term capacity o ICES, many harvested stocks are evaluate on a scientific and annual basis. Area 37, through GFCM and STECF, produce also a lot of stock assessment even if the big issue for Area 37 is the stock definition based on regulated area (GSAs) instead of biological definition of stock.

   In Both Area 27 and 37 a lot of fleet are harvesting Cephalopods and crustaceans and these particular stocks, even if they produce high fishing values, are not evaluated in a similar way as fishes. We could not use F/F_{msy} values for stocks like Atlantic Great Scallops even if they are economically essential for many fleets. Most often, they are local stocks assessed at a national level. In addition, stocks assessment method for this kind of species do sometimes not exist because of lack of knowledge on the concerned species.

   Outside these two big areas, TUNA RFMOs are also very efficient to produce F/F_{msy} values even if the assessment process, involving many different countries is a real tricky problem. Other Rfmos are a little bit less efficient (due to the lack of data or/and of cooperation between the countries to develop a common fisheries policy). For the calculation in Carabbean Island, there is few (or no) formal stock assessment except for Tunas.

6- We also need catches information at the stock level, that means with a good species identification and spatial catches. In Mayotte, as example, the first species caught is “Marine Fishes nei”. Not easy to link that category to a specific stock. The problem is similar if the spatial declaration of the catches is too large or not given.

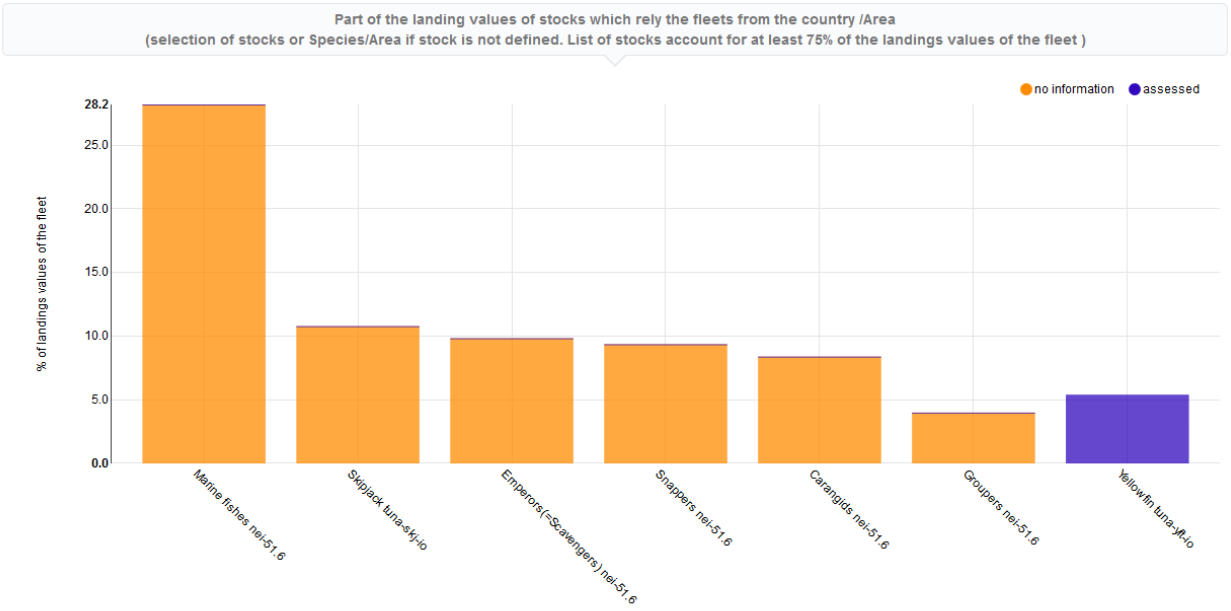


Figure 2: Lack of information for Mayotte island, many species cannot be linked to stock as there are declared as Nei.

If we want to improve the calculation for OFR, we need

4- first to strengthen Tunas stocks assessment
5- to improve Fisheries Information system to avoid nei/spp species
6- to strengthen RFMos to evaluate other stocks

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