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Scientific, Technical and Economic Committee for Fisheries (STECF)

Assessment of balance indicators for key fleet segments and review of national reports on Member States efforts to achieve balance between fleet capacity and fishing opportunities (STECF-15-15)

Edited by Leyla Knittweis & Natacha Carvalho

This report was reviewed by the STECF by written procedure in October 2015

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European Commission
Joint Research Centre (JRC)
Institute for the Protection and Security of the Citizen (IPSC)

Contact information
STECF secretariat
Address: Maritime Affairs Unit, Via Enrico Fermi 2749, 21027 Ispra VA, Italy
E-mail: stecf-secretariat@jrc.ec.europa.eu
Tel.: 0039 0332 789343
Fax: 0039 0332 789658

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Abstract

The Expert Working Group meetings of the Scientific, Technical and Economic Committee for Fisheries EWG-15-17 on Assessment of balance indicators for key fleet segments and review of national reports on Member States efforts to achieve balance between fleet capacity and fishing opportunities was held on 7th – 11th September 2015 in Larnaca, Cyprus. The report was reviewed by the STECF by written procedure in October 2015.

TABLE OF CONTENTS

SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (STECF)

Assessment of balance indicators for key fleet segments and review of national reports on Member States efforts to achieve balance between fleet capacity and fishing opportunities (STECF-15-15)

THIS REPORT WAS REVIEWED BY WRITTEN PROCEDURE IN OCTOBER 2015

Background

The Commission requests that an analysis of balance between fleet capacity and fishing opportunity be made using a standard approach across all EU fleet segments and based on DCF information. Where possible, evaluation should use data reference year 2009 to 2013 or 2014 if data are available

Request to the STECF

1. **Consider the technical, economic and biological indicators contained in the European Commission Guidelines (COM 2014, 545 final)[1], and comment on the balance or imbalance for the fleet segments provided according to the criteria of the guidelines.**

JRC will provide tabulated values (in the same format as the MS indicator tables in the STECF 15-02 data table for all indicators as detailed in items i) to vi) below, covering all MS fleet segments wherever the necessary data is available, with a minimum of 80% of the value of landings of each MS**.**

STECF is requested to calculate the following indicators specified in the 2014 guidelines:

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

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

For fleet segments for which the indicators can be calculated, STECF is requested to calculate the indicators and present the trend over the last 5/6-year period, the sustainability of the situation, and the availability or reliability of data.

For fleet segments for which any of the indicators cannot be calculated, STECF is requested to identify the problem with the data.

2. STECF is requested to comment on the proposed measures in the action plans submitted by Member States to eliminate the imbalance as identified in their fleet reports and based on the indicators that they have used.

STECF response

STECF reviewed the report of the EWG 15-17 and notes the considerable efforts made by Member States in preparing their national Reports and the efforts of the Expert groups to address the requests from the Commission. The Expert Group Report is comprehensive and provides a detailed commentary on Member States' National Reports and Action Plans and a critique on the suitability and utility of the indicators used by Member States in drawing conclusions on the balance between fleet capacity and fishing opportunities.

Based on the discussions and findings in the Report of the EWG 15-17, the STECF wishes to make the following observations and conclusions.

TOR 1 – Assessment of Balance Indicators

STECF observations and conclusions on the assessment on balance indicators

STECF notes that the EWG 15-17 assessed balance indicator status for 2013 according to the thresholds and criteria in the 2014 Balance Indictor Guidelines, as requested by the TOR and provided comment on whether specific fleets segments were in or out of balance with their fishing opportunities in 2013.

STECF notes that as was the case in previous years, there are a large proportion of fleet segments for which no assessment based on biological, economic, and/or technical indicators is possible for the most recent year. The data coverage and quality required to calculate the various indicators specified in the 2014 Guidelines (COM (2014) 545 Final), needs to be improved to increase the consistency of the resulting indicator values. Assessments of the individual technical, economic and biological balance indicators in relation to the 2014 Guidelines presented in the report of EWG 15-17 by MS fleet segment should therefore be interpreted with caution.

STECF notes that in order to improve the current poor coverage of the SHI and SAR indicators, it would be necessary that analytical assessments become available for more stocks which make important contributions to total landing values. A prioritised list of required stock assessments is available in Annex II of STECF report 15-02.

As was the case in 2014, the 2015 SAR calculation did not distinguish between (a) fleet segments which did not land any stocks considered at risk, (b) fleet segments for which landings data was not submitted by MS, and (c) fleet segments for which landings data was submitted but other problems were also encountered (e.g. a lack of information on fishing

sub-regions etc.). Notwithstanding the major issues regarding the utility and application of the SAR indicator already identified by STECF, STECF considers that any future developments in the methodology used to calculate the SAR indicator is revised and updated so that such factors can be identified and reported in the indicator summary table.

A summary of the conclusions reached by assessing fleet segment status according to the criteria and thresholds of the 2014 Balance Indicator Guidelines for Area 27 (Northeast Atlantic), Area 37 (Mediterranean and Black Sea) and OFR (Other Fishing Regions) is given below.

Area 27

Based on the SHI indicator, 67% of fleet segments for which an assessment was possible were indicated to be out of balance with their fishing opportunities in 2013. STECF concludes that because of the serious problems concerning the methodology to calculate the SAR indicator outlined in the EWG 15-17 report, the indicator values should not be considered reliable.

With regards to the economic indicators, 35% of fleet segments for which the RoFTA was calculated, 36% of fleet segments for which the RoI was calculated (in the guidelines RoFTA is required with RoI as an alternative if RoFTA is not available but sometimes both are provided), and 35% of fleet segments for which the CR/BER was calculated were indicated to be out of balance with their fishing opportunities in 2013.

For fleet segments for which the VUR indicator was calculated 69% were indicated to be out of balance with their fishing opportunities in 2013. The proportion of fleet segments indicated to be out of balance by the VUR-220 indicator were similarly high at 58%.

According to the criteria in the 2014 Guidelines, for most fleet segments in Area 27 for which economic, technical and biological indicator values could be calculated, values over the period 2009-2013 were indicating progressively less imbalance.

Area 37

Based on the SHI indicator, 84% of fleet segments for which an assessment was possible were indicated to be out of balance in 2013.STECF concludes that because of the serious problems concerning the methodology to calculate the SAR indicator outlined in the EWG 15-17 report, the indicator values should not be considered reliable.

With regards to the economic indicators, 53% of fleet segments for which the RoFTA was calculated, 18% of fleet segments for which the RoI was calculated, and 53% of fleet segments for which the CR/BER was calculated were indicated to be out of balance in 2013.

For fleet segments for which the VUR indicator was calculated, 61%were assessed as being out of balance with their fishing opportunities in 2013. Estimates of fleet segments indicated to be out of balance by the VUR-220 indicator were higher at 82%.

It was not possible to calculate a time series for the SHI for fleets operating in Area 37 because the data required were not available. To facilitate the future calculation of indicator values, a stock status database should be established for the Mediterranean Sea. STECF agrees with the conclusion of the EWG 15-17 that an analysis based on SAR indicator values would be unreliable. Analyses of economic indicators showed that trends in performance over 2009-2013 were improving for the majority of fleet segments. However values for the vessel utilisation ratio indicate increasing imbalance for most assessed fleet segments during that period.

OFR

From a total of 94 OFR fleet segments, indicators were only available for a small proportion of these (typically less than 10% depending on indicator). Given this, only a small number of OFR fleet segments could be assessed. Since the number of fleet segments is very low STECF does not consider it appropriate to present any conclusions for OFR fleet segments, or to present conclusions with regards to indicator trends. STECF concludes that if indicators for OFR fleet segment are required, then a consolidated stock status database for stocks of interest to the EU in OFR will be required. Moreover, although the fleet economic data call requests landings data in OFR at DCF geographic stratification level 3 (i.e. FAO-Division level), not all MS have submitted data at this level.

STECF General Observations and Conclusions on the utility and appropriateness of balance indicators

STECF reiterates previous advice (see SETCF report 15-02) that no single indicator considered in isolation, can determine whether a fleet segment is overcapacity or imbalance with its fishing opportunities. Furthermore, STECF notes that indicators are not definitive metrics on which balance can be explicitly measured and therefore require a degree of interpretation and judgement when determining whether a fleet is in or out of balance with the available fishing opportunities. The values and weighting for all available indicators should be considered when assessing whether the capacity of a fleet segment might, in the years represented, have been out of balance with fishing opportunities. In addition, such evaluations should also include consideration of political aims and preferences, the individual characteristics of fleet segments, communities and fisheries and also consider the broader objectives of the CFP such as achieving Fmsy by 2020 at the latest; the potential impacts of the landing obligation and the potential application of Fmsy ranges in Multi Annual Plans.

Given these points, STECF considers that the judgement of whether a fleet is in or out of balance is the responsibility of managers and not one that can be scientifically rationalised. STECF considers that it is not competent to make such a judgement and therefore the comments in this report largely relate to the utility of the indicators specified in the 2014 Guidelines and suggestions for future revisions.

Although the SHI and SAR indicators were assessed during EWG 15-17, as requested by the TOR, STECF notes that there are serious problems and limitations with these indicators. These have been previously discussed in detail elsewhere (see STECF report 15-02). Due to these shortcomings STECF concludes that neither the SHI nor the SAR indicators should not be used in isolation in determining whether a fleet is out of balance with its fishing opportunities. However, using them in conjunction with the economic indicators may help Member States and the European Commission to identify problematic fleet segments that have recently had both a major biological impact and a high economic dependency on overharvested stocks, thereby providing an indication on which fleet segments may need to be targeted for management action.

STECF notes that when the economic performance of a fleet is indicated to be unsustainable it could be considered to be out of balance with it’s fishing opportunities. However, such a situation may only be short-term and can be influenced by a number of external factors such as high fuel costs or low landing prices, which may vary over time. As a consquence a more detailed analysis may be required to determine whether the situation is likely to be persistent or transient.

STECF notes that the economic indicators used to assess whether specific fleet segments are in or out of balance with their fishing opportunities (ROI or RoFTA, Net Profit margin and CR/BER) are essentially measurements on the use of capital in the fishery. Currently, there are no indicators that consider the other two factors of production, i.e. labour and natural resources. STECF therefore advises that at least one economic indicator that is independent of the capital value, and covers at least one of the other production factors (such as GVA per FTE) should be included in future balance assessments.

STECF further advises that both short-term and long-term factors need to be taken into account when interpreting balance indicators and developing management action plans.

In particular, the indicator guidelines state that an SHI value above 1 could be an indication of imbalance if it has occurred for three consecutive years. However, such an assessment undertaken in 2015 is inevitably based on data from 2011-2013 and as such, will reflect the situation in the past and not the situation in 2015 or future years. This is particularly true if in the past, fishing opportunities were set at levels that are greater than those consistent with fishing at F_{MSY} e.g. through a management agreement or through negotiation. *De facto*, fleets exploiting such fishing opportunities will have SHI values greater than 1 providing the value of those fishing opportunities represent a reasonable proportion of the fleets' total landings value.

A general conclusion is that if fishing opportunities are set in line with exploitation rates that exceed F_{MSY}, any indicator based on the ratio F/F_{MSY} will indicate some degree of overcapacity or imbalance irrespective of whether the fleet is able to generate normal profits. Hence the value of such indicators will be largely driven by the fishing opportunities set and not by the capacity of the fleets exploiting such fishing opportunities. The crucial point seems to be whether the combination of capacity utilisation and impact on the stock is such that the fleets are able to take full advantage of their fishing opportunities and at the same time generate normal profits. If they cannot, then they may be considered to be overcapacity and out of balance with their fishing opportunities.

The utility and consistency of the indicator values are currently compromised by a deficit of appropriate fleet segment-specific and fisheries specific2 data and could be improved if Member States would provide more comprehensive datasets with higher coverage of fleet segments, and if more analytical stock assessments were available from the relevant scientific bodies (e.g. GCFM, ICES, ICATT etc). The proportions of fleet segments assessed using each indicator during EWG 15-17, were 42% using the SHI, 80% using the RoFTA / 18% using the RoI (RoI is only calculated if data on fishing rights are available), 81% using the CR/BER, and 66% using VUR / 93% using the VUR-220. The proportion of fleet segments assessed using the SAR could not be estimated accurately due the way the indicator was calculated. Although some improvements were made to the calculation of the biological indicators, in part as a result of an ad hoc indicator preparation meeting which took place at the JRC in June 2015, EWG 15-17 participants nevertheless identified several additional errors which needed to be addressed.

The relevance of economic and technical indicators to assess the sustainability of small scale fishing segments was questioned, and STECF considers that in particular the vessel use indicator as currently calculated, is generally uninformative and may be misleading because many small scale vessels only fish part-time and de facto their annual fishing activity will

[2] This is relevant especially for the economic data as the data is provided on fleet segment level which can be quite broad and the vessels fishing in several fisheries.

always be less than their potential maximum fishing activity. For similar reasons, careful consideration needs to be given to how meaningfully the economic indicators values indicate whether small-scale fleets are likely to be in or out of balance with their fishing opportunities.

STECF notes that the possibility of using biological indicators at the same level of clustering as economic indicators, as proposed during previous EWGs, was discussed based on examples of the SHI indicator calculated for both clustered and un-clustered segments. STECF notes that clustering cannot be generally recommended for biological indicators. If "large" segments are combined with "smaller" or less dominant segments with differing indicator values or trends, the resulting indicator value for the clustered segment is weighted towards the dominant segment therefore masking the fact that the original indicator values were different.

Notwithstanding the limitations and deficiencies identified above, and the recurring STECF comments and advice identifying these, STECF notes that if the European Commission wish to continue using the existing suite of indicators, there are a number of issues and points that could improve the coverage and in some cases the appropriateness of the indicators when managers are deciding upon the balance status of a given fleet segment. These include the availability of catch rather than landings data for the calculation of the biological data; availability of catch and effort data at appropriate geographic stratification (Area 37); catch data differentiated by species in cases where species are combined for reporting requirements; identifying and categorizing 'stocks at risk' is subjective and should be refined; and a common methodology for the calcuation of "maximum days at sea" is required. While such develeopments may improve the scope of the indicators, STECF consisders that this will not necessarily result in any improvements in their utility given the methodologial issues identified previously (STECF 15-02).

STECF acknowledges that there are no immediate plans by the Commission to revise the current suite of indicators or the Guidelines. Nevertheless, recognising that there may be a need to undertake such a revision at some future date, STECF suggests that it would be appropriate to commence investigating the properties and utility of alternative indicators at the earliest opportunity and well ahead of any decision on which indicators are to be used. The guidelines to Member States would than need to be revised accordingly and ideally include explicit instructions on precisely how indicator values should be calculated and how they should be interpreted in the context of the balance between capacity and fishing opportunities. STECF considers that the above work would best be undertaken by a dedicated Expert Working Group.

TOR 2 – Evaluation of Member State Action Plans

STECF Conclusions on Individual Member State Action Plans

STECF notes that EWG 15-17 evaluated MS action plans against the 2014 Balance Indicator Guidelines (COM (2014) 545 Final). Expert judgements are based on comparing the submitted Member State action plans to the requirements of the 2014 Balance Indicator Guidelines.

STECF notes that there were more Member State action plans in 2015 than in 2014. In total, 16 Member States identified fleet segments which they consider to be imbalanced, or showing potential signs of being imbalanced, using biological, economic or technical indicators and/or supplementary information, and therefore requiring action plans according to COM (2014) 545 Final. However, a number of Member State action plans lacked clear adjustment targets, tools or timeframes as required according to COM (2014) 545 Final. A

further 5 Member States concluded that no fleet segments clearly demonstrated imbalance and did not submit action plans.

Belgium (BEL)

No fleet segments were identified by the Member state as being imbalance and therefore no action plan was provided.

Bulgaria (BGR)

The Bulgarian authorities presented an action plan that clearly identifies fleet segments that the Member State considers to be imbalance, along with adjustment targets, tools and timescales targeting these fleet segments. Noting COM (2014) 545 Final, EWG 15-17 is unable to consider the appropriateness of the proposed capacity reduction scheme as the action plan does not describe the reasons for this or the associated fleet reduction targets. EWG 15-17 notes that the biological indicators used in the action plan do not reflect those contained in the guidelines communicated to Member States (COM (2014) 545 Final).

Croatia (HRV)

Croatia has provided an explicit action plan. The Member State's choice of which fleet segments should be included in the action plan is described in detail. The action plan included both adjustment targets and tools proposed by the Member State. EWG 15-17 cannot comment on the reasoning behind the level of adjustment targets and tools since no explanation was provided by the Member State.

Cyprus (CYP)

The segments identified in the action plan correspond to those identified by the MS in its national fleet report as being imbalance. The MS rationale for selecting such fleets is also explained in the action plan. EWG 15-17 notes that the action plan contains arguments in support of the chosen targets and tools. The timeframe for the delivery of tools is clearly presented.

Denmark (DNK)

The actions proposed in the Danish action plan are not specific to any particular DCF fleet segments. The targets and the timeframe for proposed actions are not clearly specified and described.

Estonia (EST)

No fleet segments were identified by the Member state as being imbalance and, as such, no action plan was provided.

Finland (FIN)

No fleet segments were identified by the Member state as being imbalance and, as such, no action plan was provided.

France (FRA)

The action plan is explicit in content and consistent with the fleet report. Timelines are presented along with adjustment targets that are supported with a clear rationale for their calculation. However, timelines presented are often more reflective of decision milestones rather than implementation. Tools for each fleet segment identified as having "enduring imbalance" are presented. There is a strong focus on cessation of activities through decommissioning, although EWG 15-17 notes that several other alternatives are provided.

Germany (DEU)

The German action plan is based on a full assessment of indicators as included in the fleet report. EWG 15-17 notes that the proposed plan includes a range of global adjustment targets and tools, along with a timescale for implementation and monitoring. EWG 15-17 notes that it would be helpful if quantitative targets were used in order to assess the Member State's progress towards adjustment targets over time.

Greece (GRC)

The fleet report from Greek authorities does not draw any conclusions with regards to the balance or imbalance of national fleet segments and no action plan is provided. However, EWG 15-17 notes that the report identifies pressures on some stocks according to biological indicators. In relation to these stocks, the fleet report concludes that "these species are the main target species of trawlers and, therefore, fishing efforts should be further reduced on the basis of a preventive approach", however no supporting fleet segment balance analysis or action plan is provided by the Member State.

Ireland (IRL)

Based on economic performance, the Irish action plan reflects the conclusion that "*some degree of fleet adjustment is necessary for the Irish polyvalent (12 – 24 m LOA) fleet*". The closest equivalent by DCF fleet segmentation are the fleet segments DTS 12-18 m and DTS 18-24 m. In the MS action plan Ireland further concludes that '*the possibility of overcapitalisation within the polyvalent 24-40 m length class also exists*".

Ireland outlines reasons why in the opinion of the MS technical indicators give an inaccurate picture, and biological indicators are only indicative of imbalance, and should not be used to draw definite conclusions on imbalance.

The rationale behind the choice of fleet segments included in the action plan based on economic indicators is not clearly described. In particular STECF notes that it is not clear why the action plan states that "*some degree of fleet adjustment is necessary for the Irish polyvalent (12 – 24 m LOA) fleet*", but the polyvalent 24-20m length class is not considered in the action plan.

Italy (ITA)

In the action plan, Italy aims to rebalance the capacity and productivity of the main fish stocks by reducing current fishing mortality (Fc) by an average of at least 20 percent. This is to be done by the proposed implementation of a capacity reduction plan targeting a further 7 percent reduction in the capacity (GT/kW) of the trawler fleets targeting demersal stocks and a 10 percent reduction in capacity (GT/kW) of the purse-seine/pair-trawling fleet (in GSA 17 & 18). These capacity reductions are proposed in addition to reductions achieved under schemes financed through the European Fisheries Fund that are due to be completed in 2015.

The targets listed in the action plan are clearly set out by fleet segment (fishing methods, length categories, Geographical Sub-Areas and, species groups). Targets are provided as percentage reduction in capacity with accompanying information on the precise quantity by GT, vessel number, and cost. Noting COM (2014) 545 Final, EWG 15-17 notes that it would be useful to better understand the reasons why a capacity reduction scheme on the scale envisaged is required for the identified fleet segments.

While no specific timeframe is identified in the action plan, the Member State's fleet report does note that the percentage reduction identified may be achieved by the end of 2017 on the basis of financial resources allocated in the Operational Programme.

The Member State also envisages further reductions in fishing mortality (of at least 10%) to be brought about through multi-annual management plans provided for by Regulation (EU) No 1380/2013 (Articles 9 and 10) and/or through changes in the management plans in force (under Regulation (EC) No 1967/2006). Italian authorities consider that this will be achieved through a combination of temporary cessation, effort control, and a ban on towed gear in biological protection areas.

Latvia (LVA)

Latvian authorities present a plan to decommission one segment, DFN 24-40, targeting cod stocks in the Baltic Sea. Adjustment targets and tools are specified, while a detailed timeframe for implementation is lacking.

Latvia presents one action plan for one fleet segment without explaining why this segment has been chosen and other segments haven't been chosen. EWG 15-17 notes that further clarification is required by the Member State as to why this decision has been made.

Lithuania (LTU)

The Lithuanian action plan identifies the demersal trawl segment (VL24-40) operating in the Baltic to be at risk of imbalance and gives a clear explanation for the causes of this. There is good consistency between the fleet report and action plan submitted by the Lithuanian authorities. EWG 15-17 is unable to assess the appropriateness of the proposed adjustment targets as no rationale for the scale of adjustment targets is provided.

Malta (MLT)

The Maltese action plan would benefit from clearly defined and quantitative adjustment targets and more detailed timeframes outlining the implementation of the proposed management measures.

Netherlands (NLD)

No fleet segments were identified by the Member state as being imbalance and therefore no action plan was provided.

Poland (PLD)

The proposed decommissioning actions for segments PG 10-12 and DFN 12-18 and temporary cessation for the segments DTS 12-18 and DTS 18-24 are consistent with the results of the indicators presented in the fleet report and action plan.

For the segments TM 18-24 and 24-40 for which no action is proposed in the action plan, and given the possible misclassification of vessels suggested in the fleet report, EWG 15-17 notes that close monitoring could assist with the development of corrective actions in the future if required.

Portugal (PRT)

Although both the Portuguese report and plan contain detailed analysis of fleet segments, EWG 15-17 notes that action plans for the two chosen segments were drafted based on stock status and the possible negative impact of these segments. Since plans were based on complementary information, beside balance indicators, EWG 15-17 notes that it is helpful to provide a detailed explanation for this decision and cannot make further comment without this information. In addition, both action plans are missing clear information on targets and timeframes.

The Portuguese action plan would benefit from a clear statement on the rationale for the chosen fleet segments, and concise adjustment targets and timescales. If no action is to be

taken in the short-term, EWG 15-17 notes it important that a monitoring plan is put in place while the Portuguese authorities are assessing whether to introduce management tools and measures.

Romania (ROU)

No fleet segments were identified by the Member state as being imbalance and therefore no action plan was provided.

Slovenia (SVN)

Slovenian authorities propose an action plan for purse seines since these vessels are already the subject of a multiannual management plan in the Adriatic Sea. The Slovenian authorities further conclude that netting segments (DFN) are imbalance according to economic and technical indicators. However, biological indicators have not been calculated for this segment

EWG 15-17 cannot assess the Member State's decision to exclude more than half of Slovenia's fleet segments from action plans as no indicators are presented.

The Slovenian action plan would benefit from a clearer rationale why indicators were calculated for certain fleet segments but not for others, the inclusion of clear adjustment targets, as well as timeframes for implementation.

Spain (ESP)

The fleet report highlights several fleet segments for which Spanish authorities consider there are signs of imbalance, these include several gear types in the North Atlantic, and several in the Mediterranean. Fleet segments have been classified according to the fishing grounds that they work in (North Atlantic national fishing grounds, rest of the North Atlantic, Mediterranean, Canary Islands and other regions).

Due to late transmission of Spain's final action plan, a full English translation of the plan was not available to EWG 15-17 during the meeting and the proposed actions could not be reviewed.

Sweden (SWR)

It is not possible to compare biological, technical and economic indicators due to different segmentation by the Member State. The action plan would benefit from clearly defined adjustment targets.

United Kingdom (GBR)

The UK states that, according to the combination of indicators, none of the fleet segments "can be conclusively defined as out of balance using the full range of indicators available". However, the UK does not exclude the possibility of imbalance in some fleet segments, since some indicator values were above threshold levels. Therefore the UK has presented an action plan, containing adjustment targets and tools, for all segments which the UK has assessed as possibly being out ofbalance.

The UK presented as an adjustment tool the "introduction of transition stage to demersal landing obligation - support increased selectivity measures". Adding some quantitative measurements would help to assess the effects of the proposed adjustment tools. Reference to the use of EFF and EMFF funds would also be useful.

STECF General Observations and Conclusions on MS Action Plans

STECF notes that there has been no consideration of how to assess the extent to which a fleet segment is likely to be out of balance with its fishing opportunities in the coming year. However, such as assessment, at least at outline level, would be important for designing any mitigating actions intended to improve the balance situation.

It might be possible to estimate values for some of the indicators based on expected fishing opportunities, e.g. those agreed before the start of the year in question along with some adjustment for expected increases in fishing opportunity likely to occur as a result of trade in fishing rights during the year. However, the introduction of the Landing Obligation is expected to create fundamental changes to patterns in fishing, trade of fishing rights within MS, international trades of fishing rights and therefore, will make it difficult, if not impossible, to estimate for near future years, the extent to which any given fleet segment might be in or out of balance with its fishing opportunities (the total opportunity achieved by the end of the calendar year).

STECF notes that a diverse range of management measures and tools was presented by Member States in their action plans. Member States are more likely to be able to monitor and demonstrate progress towards the specified management targets if targets are quantitative rather than qualitative. STECF notes that specific monitoring plans have been incorporated by some Member States as a means to observe and record progress towards proposed management targets. STECF considers that management targets should be specified in quantitative terms in action plans, together with details on how such targets were calculated, and accompanied by clear monitoring plans. Moreover the progress of the implementation of action plans could be outlined as part of the fleet report each year.

STECF notes that several Member States have incorporated actions relating to the objectives of the 2013 CFP, including the landing obligation. The integration of such policy targets into Member States' actions plans demonstrates an integrated and long-term approach to addressing the balance between fishing capacity and opportunities.

The lack of long term considerations when interpreting biological indicators was highlighted as a concern during EWG 15-17. STECF agrees with the Expert group that rather than providing only short-term action plans, Member States should be encouraged to articulate longer term plans (to 2020 and beyond) that set out options for fishing capacity and future fishing opportunities expected as stocks are exploited at rates corresponding to $F_{MSY.}$ These plans should also take into account the impact of other policy instruments that affect the balance between capacity and opportunity in order to appropriately address not only short-term but also long-term overcapacity.

STECF considers that it would be helpful if additional guiding principles for the preparation of action plans were incorporated into any future guidelines to Member States for the preparation of their annual fleet reports. STECF also notes that the provision of additional guidelines would also aid any future evaluations of Member States action plans.

The STECF and previous EWGs to assess balance have highlighted numerous problems and concerns regarding the current suite of indicators that are being used in conjunction with the criteria in the 2014 Guidelines to assess the balance between fleet capacity and fishing opportunities (see above). While such concerns primarily relate to the biological indicators SHI and SAR, for some fleet segments, the values for the economic indicators are also questionable. This is particularly problematic for the small-scale fleet segments. Hence any assessment of balance between capacity and fishing opportunities undertaken by Member States based solely on the indicator values may in some cases be erroneous and potentially

give rise to the development of inappropriate or unnecessary action plans. In an attempt to improve on the current situation, and at the same time recognising that currently there are no plans to consider a revision of the existing indicators and guidelines, the Expert group has nevertheless proposed alternative or additional indicators for consideration for any future revisions. While STECF agrees in principle with the Expert group's proposals, there is a need for the proposed alternative and additional indicators to be further investigated to determine their utility and the added value they might provide regarding the assessment of balance before such proposals are taken up. The Guidelines to Member States would also need to be revised to take into account any revisions to the current suite of indicators.

A potential evaluation tool is also outlined in the EWG 15-17 report which STECF agrees, may prove useful to the Commission and Member States.

REPORT TO THE STECF

EXPERT WORKING GROUP ON
Assessment of balance indicators for key fleet segments and review of national reports on Member States efforts to achieve balance between fleet capacity and fishing opportunities (EWG-15-17)

Larnaca, Cyprus, 7-11 September 2015

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

1 EXECUTIVE SUMMARY

OVERVIEW OF THE WORK UNDERTAKEN

TOR 1: *Consider the technical, economic and biological indicators contained in the European Commission Guidelines (COM 2014, 545 final), and comment on the balance or imbalance for the fleet segments provided according to the criteria of the guidelines.*

A group of thirteen experts, six biologists, six economists, and one statistician addressed TOR 1 during EWG 15-17. Values for indicators in Member State summary tables, for the period 2008-2013/2014, divided by fishing area and individual fleet segments, were provided to experts on the second day of the meeting. The tables provided included (i) the actual values for the sustainable harvest, stocks at risk, return on investment and return on fixed tangible assets, ratio between current revenues and break-even revenues, inactive fleet and vessel use indicators, (ii) comments on the fleet segment status for each indicator in the reference year 2013 according to the indicator guidelines (COM 2015, 545 final), and (iii) automatically generated comments on indicator trends in 2009-2013/2014 to facilitate the interpretation of indicator values by experts. Comments on fleet segment status for the inactive vessel indicator are based on the reference year 2014, since the relevant data was available.

In order to deal with all the indicators calculated per fleet segments experts split into smaller sub-groups of biologists and economists. Experts did not assess fleet segments from their own MS. Summary comments on the status of Member State fleet segments were compiled by the biologists and economists for each of the balance indicators. Indicators were interpreted according to the 2014 Balance Indicator Guidelines as requested by the TOR. Whilst interpreting and commenting on indicator trends experts encountered several issues related to the reliability of indicator calculations, and in particular the biological indicator values had to be revised several times; the final version of the biological indicators had to be assessed offline after the actual meeting.

EWG 15-17 focused additional effort on evaluating the quality and reliability of balance indictor calculations based on the requirements of the 2014 Balance Indicator Guidelines (COM (2014) 545 Final). Inconsistencies and problems relating to the calculation as well as the interpretation of indicator values were highlighted for biological, economic and technical indicators. When assessing technical aspects related to the calculation of indicators, experts took into account the proposals of the *ad hoc* balance indicator preparatory meeting, which took place in Ispra, Italy on the 29th-30th June 2015. In order to address the inconsistencies identified in the Balance Indicator Guidelines by previous STECF EWGs, the proposals for new biological and economic indicators presented in the STECF 15-02 report as well as in the report of the June 2015 *ad hoc* indicator preparation meeting were further developed, and elaborated on. In addition several specific strategic issues were specifically discussed by the group: (i) measures which are necessary to improve the calculation process for biological indicators, (ii) short and long-term considerations when using biological balance indicators, (ii) fleet segment segmentation and clustering caveats, (iii) the appropriateness of using certain economic and technical indicators to assess the fleet capacity of small scale fishing segments.

Since time series of F/F_{MSY} for Area 37 were once again not available to the expert who calculated the SHI indicator, it was not possible to present a time series of SHI indicator

values for the Mediterranean and Black Sea. Consequently no SHI trends over the last 5/6 year period could be presented for SHI in Area 37. Moreover, due to the large number of issues and problems identified with regards to the Stocks at Risk (SAR) indicator, the Expert Group considered that it would be inappropriate to present and assess the trend of the SAR indicator over the last 5/6 year period as requested in the TORs. EWG 15-17 was thus unable to fully address TOR1.

TOR 2: *Comment on the proposed measures in the action plans submitted by Member States to eliminate the imbalance as identified in their fleet reports and based on the indicators that they have used.*

A group of nine experts, including four economists and three biologists, evaluated action plans submitted by Member States for fleet segments for which Member States identified structural overcapacity in line with Article 22.4 of Regulation (EU) 1380/2013 during EWG 15-17. At the start of EWG 15-17 experts discussed the protocol and criteria described in the STECF 15-02 report to assess Member State action plans. The group agreed that the same approach would be used to assess the action plans submitted by Member States during EWG 15-17. In addition to the action plans submitted by Member States, EWG 15-17 also evaluated the fleet reports of Member States for which no supporting action plan was submitted. EWG 15-17 evaluated these reports to assess whether any fleet segments were identified by the Member States as being imbalance with fishing opportunities which would therefore warrant the need for a supporting action plan. EWG 15-17 was able to fully address TOR 2.

SUMMARY OF THE MAIN FINDINGS

TOR 1: *Consider technical, economic and biological indicators for analysis of balance between fleet capacity and fishing opportunity and comment on the balance or imbalance for the fleet segments provided.*

- The balance indicator assessment undertaken by EWG 15-17 took into account a total of 544 fleet segments in European Member States in 2013. Of these 420 fleet segments were active, and 124 were inactive segments. Area 27 had a total of 241 fleet segments, Area 37 a total of 138 fleet segments, and OFR 41 fleet segments. Overall, inactive vessels amounted to 20.8% of the fleet in number, 9.9% in GT and 13.7% in engine kW in 2014.
- Assessing balance indicator status in 2013 according to the thresholds and criteria in the 2014 Balance Indictor Guidelines revealed that overall a higher percentage of fleet segments were out of balance in Area 37 compared to Area 27. Assessments were only possible for a limited number of fleets operating in OFR due to poor or missing data for many fleet segments operating in OFR.
- In Area 27 (Northeast Atlantic) the SHI indicator revealed that, 67% of fleet segments for which an assessment was possible were out of balance. The percentage of out of balance fleet segments was lower when considering the SAR indicator, but serious problems remain with regards to the SAR indicator methodology, so EWG 15-17 considered the SHI to be the more reliable biological indicator. With regards to the

economic indicators, 35% of fleet segments for which the RoFTA was calculated in Area 27, 36% of fleet segments for which the RoI was calculated, and 35% of fleet segments for which the CR/BER was calculated were out of balance. The technical indicators revealed that 69% of fleet segments for which the VUR indicator was calculated were out of balance in Area 27. Estimates of out of balance fleet segments for the VUR-220 indicator were similarly high at 58%.

- In Area 37 (Mediterranean and Black Sea) the SHI indicator revealed that 84% of fleet segments for which an assessment was possible were out of balance. The percentage of out of balance fleet segments was lower when considering the SAR indicator, but serious problems remain with regards to the SAR indicator methodology, so EWG 15-17 considered the SHI to be the more reliable biological indicator. With regards to the economic indicators, 53% of fleet segments for which the RoFTA was calculated, 18% (2 out of 11) of fleet segments for which the RoI was calculated, and 53% of fleet segments for which the CR/BER was calculated were out of balance in Area 37. The technical indicators revealed that 61% of fleet segments for which the VUR indicator was calculated were out of balance in Area 37. Estimates of out of balance fleet segments for the VUR-220 indicator were even higher at 82%.
- Indicator trends in 2009-2013 were improving for the majority of fleet segments for which economic, technical and biological indicators could be assessed in Area 27. Analyses of economic indicators showed that indicator trends in 2009-2013 were improving for the majority of fleet segments in Area 37. However trends for the vessel utilisation ratio were worsening for the majority of the assessed fleet segments. It was not possible to assess biological indicator trends in Area 37 since it was not possible to access the data required to calculate a time series for the SHI, and EWG 15-17 considered a trend analysis based on SAR indicator values to be too unreliable.
- EWG 15-17 assessed balance indicator status for individual indicators in 2013 according to the thresholds and criteria in the 2014 Balance Indictor Guidelines. EWG 15-17 reiterates previous STECF advice that no single indicator can be considered to be a reliable indicator of overcapacity or imbalance. The values and weighting for all available indicators should be considered when assessing whether the capacity of a fleet segment might, in the years represented, have been out of balance with fishing opportunities. By definition, the role of indicators as a basis to determine whether a given fleet is in or out of balance is a matter of judgement for fisheries managers depending on their priorities.
- Even if all indicators are calculated for a fleet segment, a conclusion cannot unequivocally be drawn on the balance between fishing opportunity and fleet capacity for a fleet segment based only on their values. The indicator values should serve to prompt Member States to further investigate the relevant fleet segment.
- The utility and reliability of the indicator values are currently compromised through a deficit of appropriate fleet segment-specific data and would be improved if in future, Member States gave priority to providing more comprehensive datasets with higher coverage, and efforts to carry out stock assessments were increased.
- Improvements were made to the calculation of the biological (SHI and SAR) indicators in 2015. This was possible since (i) several Member States submitted landings data at GSA level for Area 37 in response to the economic data call for the

first time, and (ii) an *ad hoc* indicator preparation meeting took place in June 2015 to help prepare the balance indicator tables for EWG 15-17.

- Nevertheless several errors were found in the biological indicator calculations. EWG 15-17 considers that the current process to calculate biological indicators should be revised. The construction of a comprehensive database which contains all the necessary input data for Areas 27, 37 and OFR is urgently required.
- Based on the data received, it is possible that some MS may have overlooked or were unable to identify some fleet segments that are candidates for further investigation as to whether they could be considered out of balance with available fishing opportunities.
- An assessment concluding an imbalance in the recent past, does not necessarily imply the existence of imbalance in current or near future years. The data used to calculate indicator values lags at least two years behind the year in which Action Plans are generally prepared. When considering future actions, MS should consider the possibility that both the fleet capacity and the fishing opportunity are likely to have changed since the data were collected.
- There is a need to consider both short and long-term options for the management of fishing capacity when developing action plans. Rather than providing only short term action plans, Member States should be encouraged to articulate longer term plans (to 2020 and beyond) that set out options for fishing capacity in line with expected future fishing opportunities as exploitation rates tend towards F_{MSY}. These plans should also take into account the impact of other policy instruments that affect the balance between capacity and fishing opportunities.
- The 2014 Balance Indicator Guidelines issued to Member States presently are ambiguous in a number of places and the Commission could consider the adoption and dissemination of new guidelines. To assist, EWG 15-17 has provided suggestions for biological, technical and economic indicators that may help in this process. A dedicated EWG meeting could be convened to assist this process.
- An evaluation tool which may help prove to be a useful aid to the Commission and Member States in addressing the issue of balance/capacity in the future was developed by the expert responsible for the calculation of the SHI values (Jerome Guitton). A summary of the tool and web access details are presented.

TOR 2: *Comment on the proposed measures in the action plans submitted by Member States to eliminate the imbalance as identified in their fleet reports and based on the indicators that they have used.*

- STECF EWG 15-17 undertook its action plan evaluations against the 2014 Balance Indicator Guidelines (COM (2014) 545 Final). Expert judgements are based on comparing the submitted Member State action plans to the requirements of the 2014 Balance Indicator Guidelines. EWG 15-17 considers that the 2014 guidelines are in need of revision, and some of the indicators used to inform an assessment of the balance between fishing capacities and fishing opportunities should be replaced.
- STECF EWG 15-17 evaluated 16 Action Plans, specifically from Bulgaria, Croatia, Cyprus, Denmark, France, Germany, Ireland, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Slovenia, Sweden and the United Kingdom.

- A further 5 Member States concluded that no fleet segments clearly demonstrated imbalance and therefore did not submit action plans.
- The evaluation of Action Plans conducted by STECF EWG 15-17 considered the following points:
    1. Consistency between fleet report and Action Plan;
    2. Presence of a discussion about the cause of imbalance;
    3. Examination of the adjustment targets;
    4. Specification of tools to reach the adjustment targets;
    5. Specification of a clear time frame.
- A diverse range of management measures and tools was presented by Member States in their action plans, including fleet measures, technical measures, economic measures and other measures.
- Member States identified fleet segments which they consider to be imbalanced, or showing potential signs of imbalance, using biological, economic or technical indicators and/or supplementary information, and therefore requiring action plans. However, a number of Member State action plans lacked clear adjustment targets, tools or timeframes as required according to COM (2014) 545 Final.
- Member States are more likely to be able to monitor and demonstrate progress towards the specified management targets if targets are quantitative rather than qualitative. EWG 15-17 notes that specific monitoring plans have been incorporated by some Member States as a means to observe the Member State's progress towards proposed management targets.
- EWG 15-17 notes that several Member States have incorporated actions relating to the objectives of the 2013 CFP, including the landing obligation. The integration of such policy targets into Member States' actions plans demonstrates an integrated and long-term approach to addressing the balance between fishing capacity and opportunities.
- Additional guidelines for the preparation of action plans should be incorporated into future guidelines to Member States for the preparation of their annual fleet reports.

2 INTRODUCTION

Expert working group EWG-15-17 was convened under STECF to assess balance indicators for key fleet segments, review national reports on Member States efforts to achieve balance between fleet capacity and fishing opportunities, and assess action plans submitted for fleet segments where Member States identified structural overcapacity. EWG-15-17 was held in Larnaca, Cyprus from the 7 – 11 September 2015.

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

2.1 Terms of Reference for EWG-15-17

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

Background

The Commission requests that an analysis of balance between fleet capacity and fishing opportunity be made using a standard approach across all EU fleet segments and based on DCF information. Where possible, evaluation should use data reference year 2009 to 2013 or 2014 if data are available

Terms of Reference

2. **Consider the technical, economic and biological indicators contained in the European Commission Guidelines (COM 2014, 545 final)[3], and comment on the balance or imbalance for the fleet segments provided according to the criteria of the guidelines.**

JRC will provide tabulated values (in the same format as the MS indicator tables in the STECF 15-02 data table for all indicators as detailed in items i) to vi) below, covering all MS fleet segments wherever the necessary data is available, with a minimum of 80% of the value of landings of each MS**.**

STECF is requested to calculate the following indicators specified in the 2014 guidelines:
(i) Sustainable harvest indicator (SHI)
(ii) Stocks at risk indicator (SAR)
(iii) Return on investment (ROI) / Return on Fixed Tangible Assets (RoFTA)
(iv) Ratio between current revenues and break-even revenue (CR/BER)
(v) The inactive fleet indicator
(vi) The vessel use indicator

For fleet segments for which the indicators can be calculated, STECF is requested to calculate the indicators and present the trend over the last 5/6-year period, the sustainability of the situation, and the availability or reliability of data.

For fleet segments for which any of the indicators cannot be calculated, STECF is requested to identify the problem with the data.

[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.

2. STECF is requested to comment on the proposed measures in the action plans submitted by Member States to eliminate the imbalance as identified in their fleet reports and based on the indicators that they have used.

3 TOR 1 ASSESSMENT OF BALANCE INDICATORS

3.1 Background

All indicators provided and used in the STECF EWGs 15-17 were calculated according to the 2014 Balance Indicator Guidelines[4]. The Commission's 2014 Balance Indicator Guidelines seek to provide a common approach for estimating the balance over time between fishing capacity and fishing opportunities according to Art 22 of Regulation (EU) No 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy.

3.2 Provision, Quality and Reliability of Indicator Values

JRC compiled a set of technical and economic indicators as part of STECF EWGs 15-03 and 15-07 (Annual economic report 2015 of the EU fishing fleets – Part 1 & 2). During the Annual Economic Report (AER) 2015[5] (hereafter referred to as 'AER 2015') meetings indicators were quality checked, analysed and summarised for the period 2008-2013/2014 (2014 for the inactive vessel indicator only). The two biological indicators were derived through two *ad hoc* contracts.

An expert group was convened from the 29th-30th June at the JRC in Ispra, Italy, and tasked with providing agreed balance indicator values in accordance with the methodologies outlined in the 2014 Guidelines to Member States (COM (2014) 545 final). Experts present at the meeting reviewed indicators, and commented on the utility and interpretation of the balance indicators prescribed in the 2014 Balance Indicator Guidelines. The biological indicators assessed during the meeting were however only preliminary values, since the 2015 stock assessment advice was not yet available when the indicator preparation meeting was convened. The report from this *ad hoc* meeting to EWG 15-17 was taken into account by the experts addressing TOR 1 during EWG 15-17, and is provided in Annex I.

A table prepared by the JRC containing all the balance indicators by MS and fleet segment (supra-region[6] + fishing technology + vessel length) was provided to EWG 15-17 on the second day of the meeting. The data were provided for each year over the period 2008-

[4] 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.

[5] Scientific, Technical and Economic Committee for Fisheries (STECF) – The 2015 Annual Economic Report on the EU Fishing Fleet (STECF-15-07). 2015. Publications Office of the European Union, Luxembourg, EUR XXXX EN, JRC XXX, 434 pp.

[6] 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.

2013/2014. Despite the preparatory meeting several revisions were necessary for the biological indicators, and the final balance indicator table had to be prepared by JRC and reviewed by experts on the last day of the meeting and subsequently offline, i.e. after the conclusion of EWG 15-17.

Table 3.2.1 lists the set of balance indicators along with some additional information.

Table 3.2.1 - Indicators provided to experts at EWG 15-17

Indicator		Calculated by	Comments
Biological indicators	**SHI** Sustainable Harvest Indicator	Dr. Jerome Guitton	1. Provided via an *ad hoc* contract. 2. Calculated by landings value for 2008-2013 for every EU fleet segment (or clustered fleet segment if the case) in Area 27 for which data were available. 3. Calculated by landings value for 2013 for every EU fleet segment (or clustered fleet segment if the case) in Area 37 for which data were available. Stock assessment parameters prior to 2013 are not readily available for Area 37 since there is no database with data on time series of $F_{current}$ (mean F) and F_{MSY} for fish stocks found in Area 37. 4. Preliminary indicator values for landings value for 2014 were provided wherever possible. 5. Fleet segments were highlighted when less than 40% of the annual value of landings came from assessed stocks.
	SAR Stocks At Risk Indicator	Dr. Armelle Jung	1. Provided via an *ad hoc* contract. 2. Calculated for 2008-2013 for all fleet segments (or clustered fleet segment if the case) for which data were available. 3. Preliminary indicator values for 2014 were provided wherever possible.
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 13-11; the target reference value to which the indicator value is compared is the 2013 risk-free interest rate. The 5-year average was also used, as stipulated in the guidelines 2. Calculated for all fleet segments (or clustered fleet segment if the case) for which data were available for years 2008-2013, the most recent year for which DCF economic data are available. 3. 2014 economic data will not be available until 2015 under the DCF. 4.
	CR / BER Current revenue as proportion of break-even revenue	JRC	1. Calculated for all fleet segments (or clustered fleet segment if the case) for which data were available for years 2008-2013, the most recent year for which DCF economic data are available.

Technical/inactivity indicators	**VUR** Fleet segment utilisation ratio Average Days at Sea / Maximum Days at Sea	JRC	1. Calculated for all fleet segments (or clustered fleet segment if the case) for which data were available for years 2008-2013. 2. Preliminary indicator values for 2014 were provided wherever possible. 3. Member States (MS) had provided either maximum observed days at sea (DAS) for each fleet segment (or clustered fleet segment if the case) or maximum theoretical DAS. 4. Due to several inconsistencies and/or relevant missing information in the data provided by some MS, the EWG also used the value of 220 maximum theoretical days at sea per fleet segment for all MS, as stipulated in the guidelines.
	Inactive vessels per length category	JRC	1. Number and proportion of inactive vessels, in number, GT and kW provided based on MS fleet DCF capacity data for years 2008-2014.
Data source: 2015 DCF data call (MARE/A3/AC(2015); EUROSTAT; ICES online stock assessment database; STECF report 14-24; CITES species list.			

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). Technical and economic balance indicators were calculated using data submitted under the 2015 DCF call for economic data on the EU fishing fleet issued by DG MARE on 4 February 2015 (MARE/A3/AC(2015); Ref. Ares(2015)421690). The two biological indicators (SHI and SAR indicator) were calculated based on DCF data[7] submitted under the same data call. Additional information needed to calculate the biological indictors ($F_{current}$, F_{MSY} etc.) was obtained from other sources (see sections for details on calculation).

The 2015 fleet economic data call requested transversal and economic data covering years 2008 to 2014. Capacity data (GT, kW, no. of vessels) was requested up to and including 2014, while employment and economic parameters were requested up to and including 2013. Most effort and all landings data were requested up to and including 2014, as well as, income from landings (non-mandatory) to allow for economic performance projections to be estimated at fleet segment and national level for 2014[8]. Landings and effort data for fleet segments operating in the Mediterranean & Black Sea region (i.e. Area 37) were requested at the GCFM-GSA level by the 2015 economic data call. This level of aggregation was requested to correctly allocate landings to the relevant stocks when calculating the biological balance indicators (see STECF 15-02 report).

In terms of the completeness of the Member States data submissions, most countries submitted the majority of the parameters requested under the call. In many cases missing data relates to fleet segments with low vessel numbers. As 'maximum days at sea by fleet segment' is not a DCF parameter, it is requested and submitted through the data call on a voluntary basis.

In terms of data quality, inevitably some 'abnormal' or unexpected estimates for various indicators were detected by JRC or the experts, and in many cases were rectified by the Member States. However, some quality issues remained outstanding. The AER 2015

[7] DCF value of landings in the case of SHI, and weight of landings in the case of the SAR indicator.
[8] Non-mandatory 2014 data requested under the DCF data call is flagged as preliminary in the AER.

highlighted that the data coming from eight Member States (Bulgaria, Cyprus, Estonia, Ireland, France, Greece, Malta, Spain) was incomplete or unreliable. Due to unreliability, data for Bulgaria, Cyprus, Greece and Malta could not be taken into account while data on the Estonian, French, Spanish and Irish fleets were excluded from time series analyses in the AER exercise. No landings data was available for Greece, Spanish landings data were only available for 2011-2013, French landings data were only available for 2012 and 2013. Data for the Irish under 10 m segments were incomplete in several years. For the Mediterranean and Black Sea (Area 37) landings data at the requested GFCM-GSA level was only made available by Italy and Croatia, as well as for parts of the Spanish and Cypriot fishing fleets.

3.3 Fleet Segment Coverage of Indicators

Some of the indicators could not be calculated for all fleet segments due to lack of data or, in the case of economic and technical indicators, due to clustering segments together, which is done in order to protect commercial confidentiality. Moreover, fleet segments necessarily include only vessels which have been active, since it is their activity that allocates them to a fleet segment. Inactive vessels are counted and categorised at national and where applicable regional level,[9] according to the length of the vessel.

Table 3.3.1 shows indicator coverage per MS in terms of the proportion of MS landed value that is made by fleet segments which have an indicator value in 2013, i.e. for which there is indicator coverage in 2013. SHI coverage is presented 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 when only taking into account 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 data provided by MS were thus considered in the SAR analysis. However due to the manner in which the SAR indicator was calculated it is not always possible to distinguish between (i) fleet segments which did not fish any stocks at risk, and (ii) fleet segments which could not be included in the analysis due to lacking or problematic landings data (see section 3.5.3.1 below). For this reason SAR coverage in terms of landed value submitted by MS has not been included in Table 3.3.1.

Table 3.3.1 - Coverage of each balance indicator in terms of landed value submitted by MS for the reference year 2013. ND = No data or insufficient data available for the calculation of the indicator in question. 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	Vessel utilisation ratio (VUR)	Vessel utilisation ratio_220 days (VUR220)	SHI	SHI +40%	Current revenue to break-even revenue (CR/BER)	RoFTA	RoI	Net profit margin

[9] Appendix III of Commission Decision 2010/93/EU specifies the data collection requirements for fleet segmentation by region.

BEL	100%	100%	100%	93%	100%	100%	0%	100%
BGR	ND	100%	100%	60%	69%	69%	0%	69%
CYP	ND	100%	100%	0%	99%	99%	0%	99%
DEU	100%	100%	100%	57%	100%	100%	0%	100%
DNK	ND	100%	100%	93%	100%	100%	100%	100%
ESP	100%	100%	54%	14%	99%	99%	37%	99%
EST	64%	100%	100%	75%	100%	100%	100%	100%
FIN	100%	100%	100%	78%	100%	100%	0%	100%
FRA	88%	100%	86%	30%	61%	61%	0%	61%
GBR	ND	100%	98%	69%	97%	97%	97%	97%
GRC	ND	ND	ND	ND	ND	ND	ND	ND
HRV	100%	100%	100%	93%	100%	100%	0%	100%
IRL	100%	100%	97%	89%	93%	93%	0%	93%
ITA	100%	100%	100%	60%	100%	100%	0%	100%
LTU	22%	100%	15%	14%	100%	100%	0%	100%
LVA	100%	100%	100%	95%	100%	100%	0%	100%
MLT	90%	100%	98%	2%	73%	73%	57%	73%
NLD	100%	100%	100%	77%	100%	32%	32%	32%
POL	100%	100%	100%	50%	100%	100%	0%	100%
PRT	3%	100%	94%	14%	100%	100%	0%	100%
ROU	100%	100%	100%	100%	100%	100%	100%	100%
SVN	100%	100%	100%	47%	100%	100%	0%	100%
SWE	100%	100%	100%	94%	100%	100%	0%	100%
Total	74%	100%	83%	45%	93%	89%	31%	89%

It is important to note that full coverage in the table above does not necessarily imply that the entire MS fleet was covered. Full coverage (100%) simply means that all the landings data submitted by the MS were considered for the assessments. In some cases, landings in value are not provided for all active fleet segments reported by a MS. For example, Germany has full coverage for SHI. However, it is known that landings in value are not provided for its large pelagic trawler fleet. As data on this variable are not submitted they are not considered in the overall assessment of coverage. For confidentiality reasons, some MS may not provide landings data for specific fleet segments in cases where the data is 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 (as is the case of Germany described above). 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 is reported by MS. For instance in the 2015 data call, Latvia and Estonia, both of which appear to have full coverage for most of the indicators, did not provide any data on their distant water fleets. 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 2013 with missing landings in value that could be identified (i.e. active fleet segments reported by MS in 2013) is presented in Table 3.3.2.

Table 3.3.2 - Summary table showing for each Member State the number of fleet segments for which data on landings in value were available in 2013, the number of active fleet segments, and the active fleet segments in 2013 with missing landing values.

MS	N fleet segments with landings in value 2013	N of active fleet segments 2013	Active fleet segments in 2013 with missing landings in value
BEL	7	10 (7 *)	
BGR	22	22 (3 *)	
CYP	5	10 (7 *)	CYP AREA 37 PG VL0006, CYP AREA 37 PGO VL0006,
DEU	13	20 (14 *)	DEU AREA27 TM VL40XX°
DNK	18	19	DNK AREA27 DRB VL1218
ESP	84	84 (60 *)	
EST	4	7 (4 *)	(?) no information available on the distant water fleet
FIN	5	5	
FRA	93	103 (72 *)	FRA AREA27 PGO VL1218, FRA OFR DFN VL0010, FRA OFR DFN VL1012; FRA OFR FPO VL0010; FRA OFR PGP VL1012; FRA OFR PS VL0010
GBR	43	43 (28 *)	
GRC	0	12	All fleet segments
HRV	34	34 (23 *)	
IRL	25	32 (23 *)	IRL AREA27 DFN VL0010; IRL AREA27 DRB VL0010; IRL AREA27 DTS VL0010; IRL AREA27 FPO VL0010; IRL AREA27 HOK VL0010; IRL AREA27 PS VL0010°; IRL AREA27 TMVL0010
ITA	23	23	
LTU	5	8 (5 *)	
LVA	4	4	? no information available on the distant water fleet
MLT	22	23	MLT AREA37 FPO VL0612
NLD	14	27 (14 *)	
POL	7	18 (9 *)	POL AREA27 DTS VL40XX; POL OFR TM VL40XX
PRT	54	57 (54 *)	
ROU	6	6 (3 *)	
SVN	4	13 (4 *)	
SWE	25	25 (7 *)	

* Number of fleet segments when considering clusters

3.4 Consideration of Indicators

In line with the meeting TOR EWG 15-17 considered the technical, economic and biological indicators contained in the European Commission Guidelines (COM 2014, 545 final)[10], and

[10] 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.

commented on the balance or imbalance for the fleet segments provided according to the criteria of the guidelines.

The group could not assess in any detail the reliability of the data and indicator values which were made available in the limited time available. For biological indicators several errors were noted and corrected during the EWG 15-17 meeting, but it was not possible to fully assess the reliability of the data that were used to calculate indicator values. Instead, additional information on, for instance, the coverage of the indicator was provided. Only a limited number of biologists attended the indicator preparation meeting; further checking and/or peer review by experts from a wider range of Member States would thus have been appropriate prior to using the indicator values for the purpose of the EWG. For the technical and economic indicators, it was assumed that AER 2015 EWGs 15-03 / 15-07 had already quality checked the data. In some cases, the assessment of the economic indicators was made difficult because of the use of inconsistent clustering of fleet segments over time by some MS, although overall there was an improvement in the clustering consistency this year.

Comments on whether specific fleet segments are in or out of balance with their fishing opportunities were made by EWG 15-17 based on the 2014 Balance Indicator Guidelines as requested by the TOR. The EWG nevertheless considers that ultimately deciding whether a fleet segment is in balance or not is a judgement which must include consideration of political aims and preferences and also depends on the individual characteristics of fleet segments, communities and fisheries. This judgement call should ultimately be made by fisheries management decision makers with relevant regional expertise.

Comments on indicator trends were automatically generated using a series of filters. The EWG considers that such automatically generated filters give better consistency than asking experts to comment on trends, which was the case in previous EWGs. The indicator preparation meeting which took place at JRC in June 2015 provided some feedback on the methodology used to generate indicator trends, however EWG 15-17 considers that the definitions and thresholds used should in future be tested in more detail. Indicator specific methods may in future increase the accuracy of indicator trends (e.g. the use of a moving average for the economic indicators could be considered due to the high level of fluctuations in some indicator values).

3.5 Assessment of Biological Indicators

3.5.1 Biological Indicator Issues, Problems and Caveats

General issues and caveats which affect the overall reliability of the biological indicators specified in the 2014 Balance Indicator Guidelines (COM 2014/595 Final) have already been highlighted in the STECF 15-02 report. A summary of those that remain relevant is presented below together with some suggestions to improve the reliability of the biological indicator values.

- Several changes to the current indicators were proposed: replacing the SHI with Number of Overharvested Stocks (NOS) and the Economic Dependency Indicator (EDI). The NOS indicator requires additional information on the total catches by stock and Member State.

- The SHI and SAR indicator values are prepared under *ad hoc* contract and complied by the JRC together with the economic indicators derived from the Annual Economic Report (AER) on the European Fishing Fleet. The methodology to calculate the biological indicator values was reviewed in a preparatory meeting of experts in JRC in June 2015 at a time when all the information required to calculate the indicator values was not available. Subsequently additional issues and errors not identified in the June meeting were discovered by the STECF EWG 15-17, the majority of which were rectified during the meeting. In future it is desirable to set up a more effective process to produce the indices (see also section 3.5.1.3).

- In 2015, following the suggestion of EWG 14-12 / 14-21 (see STECF 15-02 report), landings and effort data for fleet segments operating in the Mediterranean & Black Sea region (i.e. Area 37) were requested at the GCFM-GSA level by the 2015 economic data call. This level of aggregation was requested to correctly allocate landings to the relevant stocks when calculating the biological balance indicators (see STECF 15-02 report). Landings data at the GFCM-GSA level were however only made available by Italy and Croatia, whilst for the Spanish and Cypriot fleets only part of the data was available at level 4. For all other countries fishing in Area 37 all or part of the data was only available at geographic stratification level 3, i.e. at the level of FAO divisions.

- SHI could not be calculated for fleets operating in Other Fishing Regions (OFR), since there is no consolidated stock status database for stocks of interest to the EU in OFR. Moreover, landings data from the economic data call continues to be submitted at DCF geographic stratification level 1 or 2 (i.e. at the level of FAO areas or sub-areas) by several MS instead of the requested DCF level 3 (i.e. FAO division level). Aggregated landings data is not suitable to calculate biological indicators, for which landings data at stock level is required. EWG 15-17 thus considers that efforts to ask Member States to submit landings data at the requested DCF level 3 should be stepped up to improve the accuracy of biological indicator calculations.

- Landings weights / values are not always given at commercial species level and are reported in the generic category, for example ‘anglerfish’. The Expert group suggests that MS increase efforts to provide the landing values at the species level.

- Coastal fisheries of several MS target stocks that are assessed at national level. Such assessment should be included in indicator calculations in order to improve the quality and coverage of biological indicator calculations. The inclusion of such stock assessment data should be made after review by an appropriate scientific body.

- As previously highlighted (see STECF 13-28 and STECF 15-02) there is a need to increase the knowledge on stock status by increasing the number of available stock assessments in order to improve the representativeness and utility of the biological indicators. A list of priority stocks for which stock assessments should be carried out in order to increase the % of stocks for which values of F and F_{MSY} can be included in indicator calculations is presented in Annex II of STECF 15-02 report.

- As in some cases economic indicators are calculated for clustered fleet segments, a direct comparison of biological and economic indicator values at fleet segment level is problematic. An example of the impact clustering may have on biological indicator values is provided in section 3.12.1 of this report.

3.5.1.1 SHI Issues, Problems and Caveats

In addition to the general issues which affect the overall reliability of the biological indicators, previous STECF Balance EWG and STECF plenary reports repeatedly expressed concern about the usefulness of the SHI and the manner in which it was being estimated. It is stated in STECF PLEN-13-01 '*STECF concludes that the added value of the sustainable harvest indicator to the indicators already in use is not clear at the moment*'. The main issues highlighted by STECF in the past and during the EWG 15-17 meeting are:

- The indicator guidelines state that an SHI value above one could be an indication of imbalance if it has occurred for three consecutive years. This criteria may be interpreted as not being in line with the CFP, where it is stated: "*In order to reach the objective of progressively restoring and maintaining populations of fish stocks above biomass levels capable of producing maximum sustainable yield, the maximum sustainable yield exploitation rate shall be achieved by 2015 where possible and, on a progressive, incremental basis at the latest by 2020 for all stocks*." Therefore before 2020 an SHI indicator above 1 may reflect political decisions to reach F_{MSY} not immediately, but by 2020; it may not be reasonable to expect that all stocks are already fished at F_{MSY} in 2013 (the evaluation year in this report) and the two years before. Immediate actions based on the 2011 to 2013 SHI values could therefore be an overreaction in relation to overarching objectives of the CFP as long as the target to reach F_{MSY} in 2020 can be achieved.

- Proposals for stock management plans in the ICES area are currently taking into account F_{MSY} ranges; it is thus likely that F_{MSY} ranges which will serve as the basis for future management. SHI calculations are at present based on point estimates of F_{MSY}. SHI calculations could in future be revised to reflect the use of F_{MSY} ranges in management plans, a scenario for which the guidelines state: '*Where Fmsy is defined as a range, exceeding the upper end of the range is interpreted as "overfishing*"'. It follows that if F_{MSY} ranges instead of point estimates are used, this will have a substantial impact on SHI values because the upper limit of the F_{MSY} range is often considerably higher than the F_{MSY} point estimate.

- The SHI, used in isolation to assess whether a particular fleet segment is in balance with its fishing opportunities could be misleading because it does not provide results about the extent to which a fleet segment relied on over-harvested stocks and secondly, does not provide any indication as to the overall contribution a fleet segment makes to the overall catch from an over-harvested stock (see also section 3.8).

- Databases with historical results of stock assessments for the Mediterranean, the Black Sea and Other Fishing Regions (OFR) are required to increase indicator coverage and to calculate indicator time-series for these regions.

- The SHI may deliver a value of less than 1 for fleet segments which partly rely on individual stocks harvested at rates above F_{MSY}, hence masking instances of unsustainable fishing.

- The SHI may deliver a value of more than 1 for fleet segments which are not overcapacity with regards to their short term legally permitted harvest opportunities, i.e. fishing opportunities based on short term TACs (see also section 3.9).

- The SHI may flag problems with a certain fleet segment despite the fact that the main problem lies with another fleet segment, which in turn may not necessarily be flagged (see also section 3.8).

- An additional complication with using the SHI is that the values calculated for different fleet segments may not be comparable. For each fleet segment, the SHI gives the average dependency of that segment on stocks that are being exploited at rates above F_{MSY}, weighted according to the landings value of such stocks by the segment; the indicator does not give information about which stocks are exploited by the segment. Such information is required in order to draw up an appropriate action plan. Small vessels in particular frequently harvest only a low number of stocks, leading to a high SHI when one of these stocks is overharvested. Fleet segments with larger vessels on the other hand generally fish more stocks in different areas. Therefore their SHI is less sensitive to the overexploitation of particular stocks, and problems may be masked.

- The use of landings data from the economic data call to calculate biological indicators which should be based on catch data is not appropriate and a separate (dedicated) data call could in future be requested.

EWG 14-21 considered that the use of the SHI as an indicator to inform on whether a fleet segment may have been of out of balance with available fishing opportunities should be abandoned and replaced by two alternative indicators, the Number of Overharvested Stocks (NOS) and the Economic Dependency Indicator (EDI), which were described in the STECF 15-02 report. For a discussion and proposed evaluation tool for these alternative indicators see section 3.8.

3.5.1.2 SAR Issues Problems and Caveats

The main issues highlighted by STECF in the past and during the EWG 15-17 for the SAR indicator are:

- According to the 2014 indicator guidelines (COM(2014) 545 final), '*if a fleet segment takes more than 10% of its catches from a stock which is at risk, this could be treated as an indicator of imbalance'*. The Expert Group considers that this is not necessarily true, but it can be used to indicate that a fleet segment may be worthy of further investigation to determine whether it is not in balance with its fishing opportunities.

- The indicator guidelines state that B_{lim} should be taken as threshold below which stocks are counted as stocks at risk. The definition in the CFP in Article 4 (18) for "inside safe biological limits" is: "*Stock within safe biological limits' means a stock with a high*

probability that its estimated spawning biomass at the end of the previous year is higher than the limit biomass reference point (B_{lim})". However, to monitor the performance of the common fisheries policy (see Article 50 of 1380/2013) the Comission has defined "outside safe biological limits" as SSB less than B_{pa} (where B_{pa} is defined), OR F is greater than F_{pa} (where F_{pa} is defined)[11]. To take the deterministic or median assessment values for SSB and contrast them with the B_{lim} reference point may be inconsistent with the criteria of "high probability" and the definition used to monitor the CFP. B_{pa} could be seen as more appropriate threshold since Bpa is the SSB that gives a high probability to be above B_{lim} given the uncertainties in stock assessments in the terminal year.

- The current 10% threshold is arbitrary and has not been tested. A sensitivity analysis, using different percentage thresholds as a cut-off point in order to investigate the impact of different thresholds needs to be undertaken. In addition, currently only landings from EU fleets are used to calculate whether the landings of a certain fleet segment comprise more than 10% of the overall landings. The impact of EU fleets on stocks that are shared with non-EU countries may therefore be overestimated.

- With the exception of stocks assessed as being below the B_{lim} biological level, identifying and categorizing 'stocks at risk' is subjective due to a range of terminology used in stock advice. The Expert Group suggests in future to provide two versions of the SAR; one based on B_{lim} values (criterion a) and a second based on criteria b-d given in the Guidelines.

- In order to consider IUCN data in future (criterion d), the precise IUCN categories to be included in the SAR indicator calculations need to be agreed with the Comission.

- In addition to the IUCN Red List and CITES, species lists from other conventions (e.g. OSPAR and CMS, Barcelona Convention, etc.) could in future be considered. A time consuming data gathering exercise would be necessary to include all these listings; such an exercise should be separated from the actual calculation of the indicator.

3.5.1.3 Required Improvements to SHI and SAR Calculation Process

Two experts were contracted for the calculation of biological indicators SHI and SAR for 2008-2013/2014 for every EU fleet segments in areas 27 and 37 for which data were available. The work has implied to compile assessment results (e.g. mean F by year, F_{MSY}, $B_{current}$, B_{lim}) and policy advice information (for SAR criteria b-d) from relevant databases (ICES) and assessment reports (STECF EWGs, GFCM-SAC reports) for commercial stocks. The required information is often not easily accessible and generally requires careful data mining especially for FAO area 37, where the relevant information is not readily accessible. In addition the calculation of indicators (e.g. SAR) for stocks shared between EU and non-EU countries requires total catches, i.e. catches made by all fleet segments exploiting a particular stock. Otherwise the impact a certain European fleet has on the shared stock may be overestimated. Such data are generally available in the relevant RFMO databases (e.g. ICES, FAO/GFCM capture production databases), which are available online. However, there may

[11] Scientific, Technical and Economic Committee for Fisheries (STECF) – Monitoring the performance of the Common Fisheries Policy (STECF-15-04). 2015. Publications Office of the European Union, Luxembourg, EUR XXXX EN, JRC XXXX, 147 pp.

be instances where the relevant data are not available for the more recent years, and total catch data for OFR (other Fishing Region) stocks is difficult to obtain.

The process to estimate the indicators can be made more robust and standardized through the creation of a database compiling all the data and information required for the calculation of the biological indicators and which is updated each year. Such data include annual estimates of fishing mortality, stock biomass, biological reference points, policy advice information, as well as annual catch and landings data for all the EU fleets segments and relevant non-EU fleet segments that share stocks with EU fleets. Such data on annual catches should include data from recreational fisheries already collected under the Data Collection Framework (refer to Appendix IV of Commission Decision 2010/93/EU for a list of target species by region). The importance of recreational fisheries is well-known for several stocks (e.g. tuna, salmon, seabass), and should be considered when calculating biological indicators. A similar suggestion to set up a database with information on stock status was made in the reports of previous STECF Balance EWGs 12-10, 13-11, 14-12 and 14-21.

A standardized R-script (or something similar) could then be produced to extract data for each stock and fleet segment at the relevant spatial scale and automatically calculate indicator values. Such a standardized approach, will reduce the risk of introducing errors in the calculations. However, such a routine would need to be fully tested before being routinely applied.

3.5.2 Sustainable Harvest Indicator (SHI)

According the 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, and reliance is calculated in economic terms. 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 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.

3.5.2.1 Method of Calculating and Presenting the SHI

A detailed description and discussion of the methodology can be found in the report of STECF EWG 14-21. According to the indicator guidelines the indicator is intended to reflect the extent to which a fleet segment is dependent on overfished stocks by calculating the weighted average

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

for each national fleet segment (or cluster of segments dependent on the information provided by member states via the economic data call) where Fi is the fishing mortality available for stock i from scientific assessments (e.g. ICES and STECF advice)and Vi is the value of landings from stock i.

Data on Fi (mean F) and F_{MSY} for fish stocks found in Area 27 were obtained from the ICES online database. The full indicator time series (2008-2014) was updated based on the most recent assessments available (2015 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 at the time the working group met. Therefore, the SHI is based on the F_{MSY} point estimates only.

A database is not provided for Area 37 by GFCM, so the most recent estimate of $F_{current}$ and F_{MSY} (or its proxy $F_{0.1}$) were extracted from the STECF report on Review of Scientific Advice for 2015[12]. The Expert Group notes that, the Annual STECF Review of Scientific Advice for stocks of interest to the EU will no longer be produced and that obtaining estimates for $F_{current}$ and F_{MSY} (or its proxy $F_{0.1}$) for Area 37 in the future may be even more problematic.

With regards to highly migratory fish stocks, the same STECF report on Review of Scientific Advice - Consolidated Advice on Fish Stocks of Interest to the European Union for 2015 was used as a source of stock assessment results and advice for the following stocks: (i) Eastern Atlantic and Mediterranean Sea bluefin tuna, (ii) North Atlantic Ocean albacore tuna, (iii) Atlantic Ocean yellowfin tuna, (iv) Atlantic Ocean blue and while marlin. As was the case for Area 37, only the most recent estimates of $F_{current}$ and F_{MSY} could be extracted from this report.
Compared to EWGs 14-12 and 14-21 (STECF 15-02 report) the following improvements were achieved during a preparatory working group held 29 – 30 June in Ispra:

1. Some landing values are reported for combined species. Previously, the reported value of combined species landings was simply divided by the number of combined species. The revised method now utilizes the landing volumes by species to apportion value by species.

   For example there are two cod stocks in Area 27.3.A: cod347d and cod-kat. There are two stock assessments, for which the most recent landings values are as follows:

Stock	cod347d	cod-kat	Total
Landings	7906843	357247	8264090
Landings proportion	0.95677	0.04323	1.00000
Stock proportion (=1/proportion)	1.04518	23.13271	24.17789

   For a hypothetical 100 Euros of declared cod, 100/1.045 will be assigned to cod347d and 100/23.32 to cod-kat:

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

Stock	cod-347d	cod-kat
Previous calculation (STECF 15-02 report)	50	50
Updated calculation (EWG 15-17)	95.69	4.32

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

2. Assessment parameters were added that are not provided by ICES webservices (i.e. *Nephrops* assessments) but contribute extensively to the value of the landings by some fleets.

3. Mapping landed species to stock (species and area) has been improved.

For Area 27 trends were calculated according to the filters detailed below for the years 2009 - 2013. No trends could be estimated for Area 37 since a timeseries of SHI indicator values could not be calculated.

Table 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* >0.5	Increasing
	Slope* <-0.5	Decreasing
	-0.5=<Slope*=<0.5	No significant trend**
	Slope = 0	Flat / null
No data for 2012 and/or 2013		No conclusion (Null value)

* The slope is calculated with the intercept of the trend line / the first value of the trend (a/i0)

** A threshold of 5% is used to indicate whether the value is significant or not.

Instances where the SHI indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments are highlighted in the indicator table. EWG 15-17 considers that for such fleet segments SHI indicator values cannot be used meaningfully to assess the balance or imbalance. No trend analysis were performed for such fleet segments.

3.5.2.2 SHI Data Availability and Reliability

Data coverage/quality was a major concern when calculating and attempting to interpret the SHI:

- Landings data was not available for Greece.

- Spanish landings data were only available for 2011-2013.

- French landings data were only available for 2012 and 2013.

- For the Mediterranean and Black Sea (FAO Major Fishing Area 37) landings data at geographic stratification level 4[13], i.e. at the level of GFCM Geographic Sub-Areas were only available for the Italian and Croatian fleets. For the Spanish and Cypriot fleets only part of the data was available at level 4. For all other countries fishing in Area 37 all or part of the data was only available at geographic stratification level 3, i.e. at the level of FAO divisions. Where information on landings at GSA level were only partially available or not available at all, it was not possible to accurately allocate landings to specific stocks. Details how the available landings data at species level was divided into stocks is available in Annex II (stocks that are not divided are not included in the list).

- For most of the main Mediterranean commercial stocks, timeseries of mean fishing mortality are not available. A database with the required stock assessment information for Area 37 is not yet available, and assessments are not carried out on a systematic, annual basis. As a result the SHI can only be calculated consistently for a few specific years/stocks and GSAs. In addition, the number of annual assessment available can be very different from GSA to GSA, which renders calculations problematic for MS with more than one GSA (e.g. Italy, Spain, Greece).The last available F/F_{MSY} value, weighted by landings reported for 2013, was used to calculate SHI for Area 37; no SHI timeseries could be presented.

- EWG 15-12 decided not to use 2014 SHI values since: (i) 2014 data were not available for all MS and (ii) previous experience has shown that landings data submitted by MS is in many cases incomplete and preliminary, and likely to be changed in subsequent data uploads.

3.5.2.3 SHI Indicator Findings

Belgium (BEL)

Out of 10 active fleet segments in 2013, the SHI indicator was available for 7 (6 of the 10 fleet segments were aggregated into 3 clustered fleet segments to provide economic data; landings data for these segments were also provided by cluster and not by fleet segment).

According to the criteria in the 2014 guidelines, the SHI indicator values for 3 of these 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator values for the 4 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

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

[13] See Annex I of Commission Decision 93/2010

The 4 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 93% of the total value of the landings by all fleet segments.

Bulgaria (BGR)
Out of 22 active fleet segments in 2013, the SHI indicator was available for 22 (the entire fleet was aggregated into 3 clustered fleet segments to provide economic data but landings data were provided by fleet segment).

According to the criteria in the 2014 guidelines, the SHI indicator values for 5 of these 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator values for the 17 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

- 16 fleet segments may not be in balance with their fishing opportunities.
- 1 fleet segment may be in balance with its fishing opportunities.

The 17 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for 40% of the total value of the landings by all fleet segments.

Croatia (HRV)
Out of 34 active fleet segments in 2013, the SHI indicator was available for 32.

According to the criteria in the 2014 guidelines, the SHI indicator values for 26 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 6 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

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

The 6 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 68% of the total value of the landings by all fleet segments.

Cyprus (CYP)
Out of 9 active fleet segments in 2013, the SHI indicator was available for 5 (5 fleet segments were aggregated into 2 clustered segments to provided economic data; landings data for these were also provided by cluster).

According to the criteria in the 2014 guidelines, the SHI indicator values for these 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.

Denmark (DNK)
Out of 19 active fleet segments in 2013, the SHI indicator was available for 18 (landings data unavailable for one fleet segment, DRB VL1218).

According to the criteria in the 2014 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 15 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

- 13 fleet segments may not be in balance with their fishing opportunities.
- 2 fleet segments may be in balance with their fishing opportunities.

The 15 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 93% of the total value of the landings by all fleet segments.

Estonia (EST)
Out of 7 active fleet segments in 2013, the SHI indicator was available for 6.
According to the criteria in the 2014 guidelines, the SHI indicator values for 1 fleet segment cannot be used meaningfully to assess the balance or imbalance because the indicator values are based on stocks that comprise less than 40% of the total value of landings by those fleet segments.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 5 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

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

The 5 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 73% of the total value of the landings by all fleet segments.

Finland (FIN)
Out of 5 active fleet segments in 2013, the SHI indicator was available for 5.

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

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 4 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

- 1 fleet segment may not be in balance with its fishing opportunities.
- 3 fleet segments may be in balance with their fishing opportunities.

The 4 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 78% of the total value of the landings by all fleet segments.

France (FRA)
Out of 103 active fleet segments in 2013, the SHI indicator was available for 75.

According to the criteria in the 2014 guidelines, the SHI indicator values for 55 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 22 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

- 15 fleet segments may not be in balance with their fishing opportunities.
- 7 fleet segments may be in balance with their fishing opportunities.

The 22 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 30% of the total value of the landings by all fleet segments.

Germany (DEU)
Out of 14 active fleet segments in 2013, the SHI indicator was available for 13.

According to the criteria in the 2014 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 9 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

- 8 fleet segments may not be in balance with their fishing opportunities.
- 1 fleet segment may be in balance with its fishing opportunities.

The 9 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 57% of the total value of the landings by all fleet segments.

Greece (GRC)
No SHI indicator values could be calculated for Greece.

Ireland (IRL)
Out of 32 active fleet segments in 2013, the SHI indicator was available for 20.

According to the criteria in the 2014 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 11 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

- 4 fleet segments may not be in balance with their fishing opportunities.
- 7 fleet segments may be in balance with their fishing opportunities.

The 11 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 86% of the total value of the landings by all fleet segments.

Italy (ITA)

Out of 23 active fleet segments in 2013, the SHI indicator was available for 23.

According to the criteria in the 2014 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 10 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

- 9 fleet segments may not be in balance with their fishing opportunities.
- 1 fleet segment may be in balance with its fishing opportunities.

The 10 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 58% of the total value of the landings by all fleet segments.

Latvia (LVA)

Out of 4 active fleet segments in 2013, the SHI indicator was available for 4.

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

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 3 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

- 1 fleet segment may not be in balance with its fishing opportunities.
- 2 fleet segments may be in balance with their fishing opportunities.

The 3 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 95% of the total value of the landings by all fleet segments.

Lithuania (LTU)

Out of 8 active fleet segments in 2013, the SHI indicator was available for 4.

According to the criteria in the 2014 guidelines, the SHI indicator values for 2 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 2 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

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

The 2 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 13% of the total value of the landings by all fleet segments.

Malta (MLT)

Out of 23 active fleet segments in 2013, the SHI indicator was available for 19.

According to the criteria in the 2014 guidelines, the SHI indicator values for 18 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 1 fleet segment which may be considered meaningful to assess balance or imbalance indicate:

- 1 fleet segment may not be in balance with its fishing opportunities.

The 1 fleet segment for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 19% of the total value of the landings by all fleet segments.

Netherlands (NLD)

Out of 27 active fleet segments in 2013, the SHI indicator was available for 14 (landings were provided by cluster instead of by fleet segment).

According to the criteria in the 2014 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 8 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

- 7 fleet segments may not be in balance with their fishing opportunities.
- 1 fleet segment may be in balance with its fishing opportunities.

The 8 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 77% of the total value of the landings by all fleet segments.

Poland (POL)
Out of 18 active fleet segments in 2013, the SHI indicator was available for 7 (landings were provided by cluster instead of by fleet segment).

According to the criteria in the 2014 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the2 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

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

The 2 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 50% of the total value of the landings by all fleet segments.

Portugal (PRT)

Azores
Out of 11 active fleet segments in 2013, the SHI indicator was available for 7 (when the case, landings were provided by cluster).

According to the criteria in the 2014 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.

Madeira
Out of 8 active fleet segments in 2013, the SHI indicator was not available.

Mainland
Out of 38 active fleet segments in 2013, the SHI indicator was available for 34.

According to the criteria in the 2014 guidelines, the SHI indicator values for 31 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 3 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

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

The 3 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 15% of the total value of the landings by all fleet segments.

Romania (ROU)
Out of 6 active fleet segments in 2013, the SHI indicator was available for 5.

According to the criteria in the 2014 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 3 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

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

The 3 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 50% of the total value of the landings by all fleet segments.

Slovenia (SVN)
Out of 13 active fleet segments in 2013, the SHI indicator was available for 4 (landings data were provided by cluster and not by fleet segment).

According to the criteria in the 2014 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 2 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

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

The 2 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 47% of the total value of the landings by all fleet segments.

Spain (ESP)
Out of 84 active fleet segments in 2013, the SHI indicator was available for 64.

According to the criteria in the 2014 guidelines, the SHI indicator values for 54 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 13 fleet segments which may be considered meaningful to assess balance or imbalance indicate:

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

The 13 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 14% of the total value of the landings by all fleet segments.

Sweden (SWE)
Out of 25 active fleet segments in 2013, the SHI indicator was available for 25.

According to the criteria in the 2014 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 22 fleet segments which may be considered meaningful to assess balance or imbalance indicate:
- 10 fleet segments may not be in balance with their fishing opportunities.
- 12 fleet segments may be in balance with their fishing opportunities.

The 22 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 94% of the total value of the landings by all fleet segments.

United Kingdom (GBR)
Out of 43 active fleet segments in 2013, the SHI indicator was available for 36.

According to the criteria in the 2014 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.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SHI indicator for the 15 fleet segments which may be considered meaningful to assess balance or imbalance indicate:
- 10 fleet segments may not be in balance with their fishing opportunities.
- 5 fleet segments may be in balance with their fishing opportunities.

The 15 fleet segments for which the SHI indicator values may be considered meaningful to assess balance or imbalance account for over 70% of the total value of the landings by all fleet segments.

3.5.3 Stocks at Risk Indicator (SAR)

According the indicator guidelines (COM (2014) 545 final) the stocks-at-risk indicator is a measure of how many stocks are being affected by the activities of the fleet segment that are biologically vulnerable – in other words, 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, the indicator guidelines suggest that this could be treated as an indication of imbalance.

3.5.3.1 Method of Calculating and Presenting the SAR

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

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

AND for which either:

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

The same methodology described in the STECF 15-02 report was applied by EWG 15-17. However, for Area 27 the latest available analytical assessments (in most cases from 2015) and reference points were utilized to update the full time series (2008-2014) of stocks that fall under the SAR criteria in a given year. For Area 37, stock assessment information from the STECF 14-24 report[14] was used. Additional information was obtained from the CITES species list for Actinopterygii and Elasmobranchii, as well as from the Council Regulations fixing annual fishing opportunities[15].

In addition, the following improvements have been achieved compared to EWG 14-21:

- A list of stocks considered at risk was drafted and presented to the *ad hoc* balance indicator preparation meeting for discussion. The manner in which some stocks were selected was revised. For Sandeel stocks, the different Sandeel Areas were grouped in the following way in order to attribute the appropriate DCF landings data and allow stock mapping:

  SA 1 & 2: IVb
  SA 3, 4, 5 & 7: Iva
  SA 6: IIIa

[14] Scientific, Technical and Economic Committee for Fisheries (STECF) – Consolidated Advice on Fish Stocks of Interest to the European Union (STECF-14-24). 2014. Publications Office of the European Union, Luxembourg, EUR XXXX EN, JRC XXXX, 747 pp.
[15] Council Regulation (EU) 2015/104 of 19 January 2015 fixing for 2015 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union vessels, in certain non-Union waters; Council Regulation (EU) No 43/2014 of 20 January 2014 fixing for 2014 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, to Union vessels, in certain non-Union waters.

- General improvements were made with regards to the attribution of DCF landings data to stocks. The data was compiled in a common database, which was used for the calculation of the two biological indicators (SHI & SAR).

The SAR calculation did not distinguish between fleet segments which did no land any stocks considered at risk, fleet segments for which landings data was not submitted by MS, and fleet segments for which landings data was submitted but other problems were encountered (e.g. a lack of information on fishing sub-regions in the case of France). The absence of a SAR value in the MS balance indicator table does thus not necessarily mean that the fleet segment was not assessed and it is important to note that the SAR values presented in the MS balance indicator table (see section 2.5 for link to table) need to be interpreted as follows:

SAR value is 1 or more
One or more stocks landed by the fleet segment are at high biological risk, and the stock(s) makes up more than 10% of the catches of the fleet, or the fleet takes more than 10% of the catches of the stock(s).

SAR value is 0
One or more stock(s) landed by the fleet segment are at high biological risk, but the stock(s) do not make up more than 10% of the catches of the fleet, or the fleet does not take more than 10% of the catches of the stock(s).

No SAR value (i.e. there is a dash '-'in the indicator table)
This can represent one of three possible situations:
1. The fleet segment did not land any stocks considered at risk;
2. The fleet segments could not be assessed due to the absence of landings data;
3. The fleet segment could not be assessed due to a problem with the submitted data.

EWG 15-17 agreed that temporal trends in fleet segment SAR indicator values may be misleading (see below section on SAR data availability and reliability for details), so no comments on trends are presented for the SAR.

3.5.3.2 SAR Data Availability and Reliability

Data coverage/quality was a major concern when calculating and attempting to interpret the SAR:

- Landings data was not available for Greece.
- Spanish landings data were only available for 2011-2013.
- French landings data were only available for 2012 and 2013.
- For the Mediterranean and Black Sea (FAO Major Fishing Area 37) landings data at geographic stratification level 4[16], i.e. at the level of GFCM Geographic Sub-Areas were only available for the Italian and Croatian fleets. For the Spanish and Cypriot fleets only part of the data was available at level 4. For all other countries fishing in Area 37 all or

[16] See Annex I of Commission Decision 93/2010

part of the data was only available at geographic stratification level 3, i.e. at the level of FAO divisions. Where information on landings at GSA level were only partially available or not available at all, it was not possible to accurately allocate landings to specific stocks. The stock reference list being used to allocate commercial landings data to the relevant stocks / sub-regions is available in Annex II.

- Although the 2014 Balance Indicator Guidelines specify catch data should be used to calculate the SAR indicator, the calculations were based on landings data. This was due to the fact that the required catch data was not available. The absence of information on by-catch and discards is an important omission and constrains the usefulness of the indicator.

- EWG 15-12 decided not to use 2014 SAR values since: (i) 2014 data were not available for all MS and (ii) previous experience has shown that landings data submitted by MS is in many cases incomplete and preliminary, and likely to be changed in subsequent data uploads.

- EWG 15-17 agreed that temporal trends in fleet segment SAR indicator values may be misleading due to the fact that (i) it is not possible to distinguish between fleet segments that (a) did no land any stocks considered at risk, (b) could not be assessed due to a lack of landings data, and (c) could not be assessed due to a problem with the submitted data (see section 3.5.3.1), (ii) The issues, problems and caveats outlined in sections 3.5.1 and 3.5.1.2. Hence, no comments on temporal trends in the SAR indicator are presented.

3.5.3.3 SAR Indicator Findings

For the reasons outlined in sections 3.5.1, 3.5.1.2 and 3.5.3.2, the EWG 15-17 considers that any comment on temporal trends in fleet segment SAR indicator values may be misleading. Hence, no comment on temporal trends in the SAR indicator are presented.

Belgium (BEL)
Out of 10 active fleet segments in 2013, the SAR indicator was available for 6, of which 1 was exploiting 3 stocks at risk.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:
- 5 fleet segments may be in balance with their fishing opportunities.
- 1 fleet segment may not be in balance with its fishing opportunities.

Bulgaria (BGR)
The SAR indicator was not available for any of the 22 active fleet segments in 2013.

Croatia (HRV)
Out of 34 active fleet segments in 2013, the SAR indicator was available for 9, of which 1 were exploiting 1 stock at risk.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:
- 8 fleet segments may be in balance with their fishing opportunities.
- 1 fleet segment may not be in balance with its fishing opportunities.

Cyprus (CYP)
The SAR indicator was not available for any of 10 active fleet segments in 2013.

Denmark (DNK)
Out of 19 active fleet segments in 2013, the SAR indicator was available for 18, of which 3 were exploiting 3 stocks at risk, and 10 were exploiting 1 stock at risk.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:
- 5 fleet segments may be in balance with their fishing opportunities.
- 13 fleet segments may not be in balance with their fishing opportunities.

Estonia (EST)
Out of 7 active fleet segments in 2013, the SAR indicator was available for 1.
According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:
- 1 fleet segment may be in balance with its fishing opportunities.

Finland (FIN)
Out of 5 active fleet segments in 2013, the SAR indicator was available for 4, of which 1 was exploiting 2 stocks at risk.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:
- 3 fleet segments may be in balance with their fishing opportunities.
- 1 fleet segment may not be in balance with its fishing opportunities.

France (FRA)
Out of 103 active fleet segments in 2013, the SAR indicator was available for 66, of which 1 was exploiting 3 stocks at risk, 3 were exploiting 2 stocks at risk and 9 were exploiting 1 stock at risk.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:
- 53 fleet segments may be in balance with their fishing opportunities.
- 13 fleet segments may not be in balance with their fishing opportunities.

Germany (DEU)
Out of 20 active fleet segments in 2013, the SAR indicator was available for 11, of which 1 was exploiting 2 stocks at risk, and 1 was exploiting 1 stock at risk (landings data were not provided by fleet segment but instead by cluster).

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:
- 9 fleet segments may be in balance with their fishing opportunities.
- 2 fleet segments may not be in balance with their fishing opportunities.

Greece (GRC)
The SAR indicator was not available for any of the 12 active fleet segments in 2013.

Ireland (IRL)
Out of 32 active fleet segments in 2013, the SAR indicator was available for 16, of which 2 were exploiting 4 stocks at risk, 1 was exploiting 2 stocks at risk, 1 was exploiting 2 stocks at risk.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:
- 12 fleet segments may be in balance with their fishing opportunities.
- 4 fleet segments may not be in balance with their fishing opportunities.

Italy (ITA)
Out of 23 active fleet segments in 2013, the SAR indicator was available for 7, of which 4 were exploiting 2 stocks at risk.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:
- 3 fleet segments may be in balance with their fishing opportunities.
- 4 fleet segments may not be in balance with their fishing opportunities.

Latvia (LVA)
Out of 4 active fleet segments in 2013, the SAR indicator was available for 1.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:
- 1 fleet segment may be in balance with its fishing opportunities.

Lithuania (LTU)
Out of 8 active fleet segments in 2013, the SAR indicator was available for 3, of which 1 were exploiting 2 stocks at risk.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:
- 2 fleet segments may be in balance with their fishing opportunities.
- 1 fleet segment may not be in balance with its fishing opportunities.

Malta (MLT)
The SAR indicator was not available for any of 23 active fleet segments in 2013.

Netherlands (NLD)
Out of 27 active fleet segments in 2013, the SAR indicator was available for 13 (landings data were not provided by fleet segment but instead by cluster).

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:
- 13 fleet segments may be in balance with their fishing opportunities.

Poland (POL)
Out of 18 active fleet segments in 2013, the SAR indicator was available for 7, of which 1 were exploiting 1 stock at risk.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:

- 6 fleet segments may be in balance with their fishing opportunities.
- 1 fleet segment may not be in balance with its fishing opportunities.

Portugal (PRT)

Azores

The SAR indicator was not available for any of the 11 active fleet segments in 2013.

Madeira

The SAR indicator was not available for any of the 8 active fleet segments in 2013.

Mainland

Out of 38 active fleet segments in 2013, the SAR indicator was available for 29, of which 3 were exploiting 2 stocks at risk, and 2 were exploiting 1 stock at risk.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:

- 24 fleet segments may be in balance with their fishing opportunities.
- 5 fleet segments may not be in balance with their fishing opportunities.

Romania (ROU)

The SAR indicator was not available for any of the 6 active fleet segments in 2013.

Slovenia (SVN)

The SAR indicator was not available for any of the 13 active fleet segments in 2013.

Spain (ESP)

Out of 84 active fleet segments in 2013, the SAR indicator was available for 55, of which 1 was exploiting 4 stocks at risk, 2 were exploiting 2 stocks at risk, 16 were exploiting 1 stock at risk.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:

- 36 fleet segments may be in balance with their fishing opportunities.
- 19 fleet segments may not be in balance with their fishing opportunities.

Sweden (SWE)

Out of 25 active fleet segments in 2013, the SAR indicator was available for 21, of which 1 were exploiting 2 stocks at risk, and 4 was exploiting 1 stocks at risk.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:

- 16 fleet segments may be in balance with their fishing opportunities.
- 5 fleet segments may not be in balance with their fishing opportunities.

United Kingdom (GBR)

Out of 43 active fleet segments in 2013, the SAR indicator was available for 33, of which 1 was exploiting 7 stocks at risk, 1 was exploiting 5 stocks at risk, 1 was exploiting 2 stocks at risk, 2 were exploiting 1 stock at risk.

According to the criteria in the 2014 Guidelines, the Expert Group notes that the 2013 SAR indicator values indicate:

- 28 fleet segments may be in balance with their fishing opportunities.
- 5 fleet segments may not be in balance with their fishing opportunities.

3.6 Assessment of Economic and Technical Indicators

3.6.1 Economic and Technical Indicator Issues, Problems and Caveats

EWG 15-17 noted some general data issues and caveats related to the calculation and assessment of economic and technical indicators, as well as problems and caveats related to the calculation of specific indicators, which are described separately below.

Data provided

Although there are still inconsistencies in the data provided by MS, there is generally a substantial improvement in data availability and quality compared to previous years. The MS additionally put in a lot of effort to make clustering time series more consistent.

Small DCF economic data samples and data quality indicators

Despite the use of DCF economic data in STECF EWGs such as the Annual Economic Report (AER) and EWGs assessing fleet segment balance indicators, there is no systematic analysis of the quality (i.e. accuracy and precision) of economic data MS submit in response to economic data calls. As for instance the size of samples may influence the reliability and robustness of data when raised to the population level, it is felt that such information could be of use in determining the power of the indicators to detect imbalances in MS fleet segments. Moreover, there are currently no uniform thresholds of minimum data quality standards below which data submitted by MS is not used.

In this context EWG 15-17 considers that information on data quality which MS submit in response to economic data calls could in future be taken into account by experts when assessing the reliability of data used to calculate economic indicators. Information on sampling strategy, achieved sample rates and coefficients of variation (CVs) for the variables being submitted are already provided by MS in response to economic data calls. However since several variables are used to calculate indicators, each with different sample sizes, CVs etc. further consideration is necessary in order to develop a method for deriving quality indicators which are informative when interpreting indicators.

Clustering of fleet segments

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. Clustered fleet segments are marked in the balance indicator table to distinguish them from unclustered fleet segments. A detailed discussion of fleet segment clustering caveats if provided in section 3.12.1.

Segmentation of the fleet
The calculation and interpretation of balance indicators using the current DCF segmentation may not necessarily facilitate the integration of economic, biologic and technical indicators. See section 3.12.2 for a detailed discussion of fleet segmentation caveats.

Small scale fishing fleets
The assessment of economic and technical indicators is challenging for small scale fishing fleet segments. Economic indicators are generally calculated based on the assumption that fishing is the main economic activity of the fleet segments being assessed. However this is often not the case for small scale fishing fleets, where vessel owners may be engaged in several economic activities and fishing is often only a supplementary source of income. In particular the use of vessel use indicators is problematic for such fleet segments.

A discussion of caveats related to assessing balance in small scale fleets is presented in section 3.11.

3.6.1.1 ROI or RoFTA Issues, Problems and Caveats

With regards to the application of the long term economic indicator RoI or RoFTA, the 2014 Balance Indicator Guidelines specify that the indicator is to be compared against the 'low risk long term interest rate'. The guidelines further suggest to use the '*use the arithmetic average interest rate for the previous 5 years'*. The STECF 15-02 report notes that this approach was taken, and specifies that the '*5-year average of the risk free long-term interest rate for each MS was used'*. On the other hand, the Annual Economic Report (AER) 2015 specifies that the indicator is compared against the 'real interest rate'.

3.6.1.2 CR/BER Issues, Problems and Caveats

In contrast to the approach taken in the STECF 15-02 report, trends in this indicator are presented in this report. However, EWG 15-17 reiterates the previous comment that due to the volatile nature of variable costs associated with fishing, the CR/BER indicator values may fluctuate considerably from one year to the next and commenting on trends which may be driven by the price of fuel for instance, does not necessarily help inform an assessment of fleet under- or over-capacity in relation to fishing opportunities.

3.6.1.3 Inactive Fleet Indicator Issues, Problems and Caveats

There are significant differences between countries regarding the percentage of inactive vessels. Some countries report over 50% of inactive vessels, while other countries report nearly none.

Examples of issues, problems and caveats related to the inactive fleet indicator identified in MS fleet reports are as follows:

Croatia (HRV)
The Croatian fleet report (p.14) states: '… *although the inactivity may indicate that there is a structural overcapacity in the fleet, it should be noted that most of the vessels less than 12 meters operate only part time and in large majority of the cases do not present the only*

source of income of the fishermen. Generally, coastal fleet of Croatia displays typical pattern of activity only during favourable period of the year, and often not as a primary activity'.

Finland (FIN)

With regards to assessment of technical indicators the Finish feet report notes (p. 13): '*... Those who engage in commercial fishing along the coast in vessels less than 10 metres long and vessel owners usually own several boats, which are not all in active use. A feature of the industry in Finland is ownership of one or two standby vessels. ... Various factors account for some slight passivity with some vessels: generational change, choices of profession, illness, etc. On the other hand, it should also be realised that, when the commercial profitability of some units falls, vessels are allowed to remain passive in the expectation, perhaps, of better times to come. In such cases, other sources of livelihood are naturally turned to.'*

According to the AER 2015 (p. 219): "*There is a break in the time series of the number of active vessels in small scale fishing in 2012 when the recording of active vessels was re-specified. This increased the number of active vessels in the fleet."*

Italy (ITA)

The Italian fleet report (p. 20) states: "*In interpreting the data some specific aspects of the Italian fleet need to be considered:*

- *there are many cases where fishing boats operating with passive gear in the 0-10 metre class are owned by older people who are no longer active members of the workforce, but they retain their ownership of the boat in case opportunities arise;*
- *in the same segment, there are cases where the owner also has larger boats in active use, and the small boat is kept in case of periods of crisis in the segment in which the larger boat operates;*
- *with respect to hydraulic dredges, it must be borne in mind that the level of activity is decided by the management consortium, subject to the availability of the resource (bivalve molluscs) and market trends."*

Malta (MLT)

The Maltese fleet report (p. 5) states: '*the majority of the inactive vessels (95.22 %) are below 12 m in length and thus, limited to remain in port or near to the coast in adverse weather. Furthermore, 76.11 % are operated on a part-time basis. Finally, Maltese fishers tend to own more than a single vessel, and in several cases one boat may be used during a given year while the other is kept inactive.*'

3.6.1.4 Vessel Utilisation Ratio Issues, Problems and Caveats

EWG 15-17 notes that several MS seem to have problems with the maximum days at sea concept and there are still erroneous ratios above 1 reported by some MS.

Examples of issues, problems and caveats related to the vessel utilisation indicator identified in MS fleet reports are:

Croatia (HRV)

The Croatian fleet report (p. 14) states: '*Similarly as for the inactive fleet indicator, the results of this indicator need to be considered in view of the fleet structure and its activity. Again, it should be noted that particularly in smaller fleet segments fishing activities do not represent the only source of income, and rarely are the main one. Due to this fact, in those segments even though the indicator shows values less than 0,7 it is considered that it is not really a sign of imbalance. This particularly holds true for FPO, HOK and MGO segments with vessels of less than 12 meters. With the seasonal character of the vessels, and their overall characteristics of operations, the VUI is calculated against the parts of the fleet that are in fact more dependent on this activity than majority. Croatia considers that in future analysis this indicator should be weighed as well, in order to indicate the shares or real influence of the activity of some fleet segments.*'

Finland (FIN)

With regards to assessment of technical indicators the Finish feet report notes (p. 13): '*It is explained by the special conditions that prevail in Finland. The icy conditions in the country in winter do not allow year-round fishing and in practice there are only 180 days a year when it is feasible to be at sea. As has already been stated, for the owners of coastal vessels, fishing*

is not usually the main source of livelihood but one of secondary income. ... Various factors account for some slight passivity with some vessels: generational change, choices of profession, illness, etc. On the other hand, it should also be realised that, when the commercial profitability of some units falls, vessels are allowed to remain passive in the expectation, perhaps, of better times to come'.

Germany (DEU)

With regards to low vessel utilistation ratios the German fleet report provides various explanations for the different fleet segments (p. 11-12): '*This can primarily be explained by the traditional and highly regionalised nature of this segment. The lion's share of the vessels are deployed in the context of a side business and, at most, are only used for a couple of days (such as at weekends) or are used seasonally for just a few weeks. The maintenance of this segment stems from the political objective of keeping the German fisheries sector as diverse as possible, of which fishing as a side business – and incidentally also agriculture as a side business – are a part.*

... there were several vessels that fished intensively in 2014 but stood in contrast to another group of vessels exhibiting a relatively low level of fishing effort. This is regarded as an effect of the fishing effort regulation given that, under Article 13 of Regulation 1342/2008, additional fishing effort may only be allocated to specific fishing effort groups rather than to all of them. Consequently, particular vessels enjoy a greater allocation of days (e.g. saithe trawlers) than others. Another factor that has a detrimental effect when calculating the indicator is the relatively high age of the vessels. On average, the vessels within this segment are 40 years old, which led to fairly long idle periods as a result of corrective maintenance and other repairs….

The fact that the indicator never peaked is attributable to the summer break in shrimp fishing. Some vessels use this as an opportunity to switch over to larger gear/nets so that they can fish for plaice. Consequently, these vessels end up recording more sea days than the ones that serve purely as shrimping boats. Once again, the fishing effort limitations had a negative impact in terms of how many sea days were spent fishing for flatfish.'

3.6.2 Return on Investment (ROI) or Return on Fixed Tangible Assets (RoFTA)

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

3.6.2.1 Method of Calculating and Presenting the ROI or RoFTA

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

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

ROI is calculated as:

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

where,

Net profit = (Income from landings + other income + income from fishing rights) - (crew wage + unpaid labour + energy + repair + other variable costs + non variable costs + fishing rights costs + annual depreciation)

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

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

RoFTA is calculated as

Net profit / (fleet depreciated replacement value);

where,

Net profit = (Income from landings + other income) - (crew wage + unpaid labour + energy + repair + other variable costs + non variable costs + annual depreciation)

EWG 15-17 applied the criteria of the 2014 Balance Indicator Guidelines to comment on whether fleet segments where ‘in balance or ‚out of balance‘. When the indicator value was less than the interest rate, but greater than zero the comment ‚not sufficiently profitable‘ was made.

Since ROI was only available for a few countries where MS introduced fishing rights, but RoFTA was available for all MS except Greece, the following analysis is mainly based on RoFTA values.

Trends were calculated according to the filters detailed below for the years 2009 - 2013.

Table 3.6.1- Methodology used to automatically generate comments on indicator trends.

Filter 1	Filter 2	Result
At least the last 2 consecutive years with data	Slope* >0.05	Increasing
	Slope* <-0.05	Decreasing
	-0.05=<Slope*=<0.05	No significant trend**
	Slope = 0	Flat / null
No data for 2012 and/or 2013		No conclusion (Null value)

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

An emphasis was placed on commenting on ROI or RoFTA findings for the most important fleet segments identified by the AER 2015 report[17] (see sections on 'Fleet Segment Level Economic performance' for the individual MS in the STECF 15-07 report).

3.6.2.2 ROI or RoFTA Data Availability and Reliability

During the balance indicator table preparatory meeting which took place at JRC in June 2015 (see Annex I), experts highlighted several MS fleet segments for which indicator calculations appeared to be erroneous, or at least questionable.

Moeoever, the Annual Economic Report (AER) 2015 highlighted that the data coming from eight Member States (Bulgaria, Cyprus, Estonia, Ireland, France, Greece, Malta, Spain) were incomplete and/or unreliable. These MS were not taken into account in the EU and regional trend analyses presented by the AER 2015. In some of these cases this incompleteness' is due to small-scale fleet segments that do not legally have to declare landings. Other reasons could be the lack of provision of economic cost data for every DCF segment that has declared landings (and hence revenue) as a result of low sample sizes, which prohbit coverage of all segments.

The following information on data availability and reliability was extracted from the STECF Annual Economic Report for 2015 (AER 2015), and / or MS fleet reports where relevant. Issues highlighted in the AER 2015 will have a direct influence on the values of the 2015 balance indicator tables (since the DCF is the data source for economic and technical balance indicators). EWG 15-17 can not ascertain with certainty whether issues raised by MS will also have influenced balance indicator values provided to experts during the balance EWG. EWG 15-17 nevertheless considers issues related to indicator calculations identified in MS fleet reports to be relevant since MS may flag important problems which should be taken into account when interpreting indicators.

<u>Bulgaria (BGR)</u>
According to the AER 2015 (p. 171) "*In 2013, the Bulgarian fleet was clustered in 3 segments: Drift net 06-12 (1137 vessels), Polyvalent mobile and passive gears 12-18m (49 vessels), and Pelagic Trawl 18-24 (18 vessels). As clustering is quite varying across years, comparisons are not possible*".

[17] Scientific, Technical and Economic Committee for Fisheries (STECF) – The 2015 Annual Economic Report on the EU Fishing Fleet (STECF-15-07). 2015. Publications Office of the European Union, Luxembourg, EUR XXXX EN, JRC XXX, 434 pp.

EWG 15-17 thus considers that the trend of RoFTA should be considered with caution due to the high variability of the data in the time series. In addition EWG 15-17 notes that data submitted by Bulgaria under the DCF was flagged as questionable in the 2015 AER.

Estonia (EST)

The STECF 15-02 report referred to "*an Estonian fleet segment operating in OFR (EST OFR DTS VL40XX)*" (p. 54). According to the AER 2015 (p. 210): '*Due to confidentiality issues, the data for the deep-sea fleet (DTS VL40XX) are not reported. There were only three companies operating with 6 vessels in this segment. The effort data are missing for the coastal fisheries segments (PG VL0010 and PG VL1012) because they were not available*.' This fleet also appears in the Estonian fleet report (p. 3), but on p.7 it is stated that '*Under the DCF, the data on expenditure, income and capital value for distant water fleet segment (length class VL40XX) is not included as the number of active vessels in this length class is too small and it is not possible to consolidate the segment with other fleet segments*'.

In addition EWG 15-17 notes that the status and trends of ROI and RoFTA for the fleet segment TM 24-40m should be considered with caution because this segment is a cluster regrouping TM, DTS, DFN 24-40 m and TM 18-24m.

Germany (DEU)

The German fleet report notes (p. 16): '*The values of the vessels themselves and the costs actually incurred by the enterprises are substantially lower than the mathematical depreciation levels and opportunity costs encompassed by the indicator. Therefore, the indicator poses problems when attempting to undertake a comprehensive evaluation of the balance between the fleet and the fishing opportunities.*'

Lithuania (LTU)

The ROI indicator has been used in national fleet report to evaluate whether fleet segments are economically sustainable in the long term, however only RoFTA was available in the STECF balance indicator table. This suggests that the MS has data on fishing rights but did not submit these as requested under the DCF in the data call. As no data was available under the DCF on the value of fishing rights, income or costs associated to fishing rights, RoI could not be estimated. Hence, only RoFTA could be provided in the STECF balance indicator table. .

Malta (MLT)

The AER 2015 mentions some questionable data on effort and employment but also (p305) "*the data related to income values are not consistent with landing values for some years (in particular in 2013).*" The AER further recommends to take caution when considering data submitted by Malta and the indicators produced using them, as these were deamed to be unreliable and of questionable coverag and quality by experts. Hence, RoI and RoFTA values are provided in the balance indicator tables but were not considered further.

Netherlands (NLD)

Values for the RoI indicator were negative for the Dutch pelagic fleet. However according to the Dutch fleet report (p.12): '*because the pelagic fleet is vertically integrated in companies the calculated losses do not mean that the sector is unprofitable: the prices used to calculate revenue are "theoretical" prices as the fish is not sold in auction but traded directly by the*

companies. However we do not take into account the revenue of final transformed product (because their prices are unknown to us), but the revenue at "first sale".

EWG 15-17 notes that if the final output price of the value-added product was known, RoI estimates would likely be more positive.

Spain (ESP)
According to the AER 2015 (p. 370) "*data collection for Spain could be difficult due the size and complexity (by fishing areas and technology) of the Spanish fishing fleet, and quality has been increasing over time, but it has still not achieve the desired levels, and further work should be addressed to improve data collection system, quality and coverage of the data provided*".

Sweden (SWE)
EWG 15-17 notes that the status and trends of ROI and RoFTA for the DTS 18-24 and 24-40m should be considered with caution because these fleets are in reality clusters regrouping a variety of fleets.

Trends in indicator status should also be considered with caution since the AER 2015 (p. 386) points out that "*The introduction of a tradable fishing right system has affected the 2010 data. Half of the vessels that had more than half of the total landings value left the fleet. There are most probably incomes in the 'other income' variable that result from selling quotas. The effect is that the profitability of 2010 is higher than it should be*".

United Kingdom (GBR)
With regards to the UK chapter the AER 2015 states that (p. 395) '*There have been no significant data issues in producing this chapter, and the coverage and quality appear to be good.*'.

However, EWG 15-17 notes that ROI and RoFTA were not available for the fleet segments involved in OFR supra region. This is due to the lack of data submitted by MS for confidentiality reasons. Moroever, the status and trends of ROI and RofTA for the DTS 18-24 m and 24-40m should be considered with caution because they are clustered fleets. DTS 18-24m is regrouping 18-24 m of DTS, PS and TM and DTS 24-40 is regrouping 24-40m of DTS and TM.

3.6.2.3 ROI or RoFTA Indicator Findings

Overall, trends in RoFTA were calculated for 284 segments, 169 of which showed an increasing trend, 111 a decreasing trend and 4 no significant trend.

The status in 2013 of 336 segments has been calculated showing 169 to be above the reference interest rate, 142 to be below the reference interest rate, and 25 to be insufficiently profitable (i.e. positive but below the target reference point).

Area 27 – general overview

In Area 27 there were complete or incomplete (due to distinct clusters over the years) time series for 473 segments. Trends in RoFTA were calculated for 194 fleet segments. Of these 116 showed an increasing trend, 75 a decreasing trend and 3 no significant trend.

The status in 2013 was calculated for 207 segments in Area 27 with 115 being above the reference interest rate, 73 below and 19 segments insufficiently profitable to cover their opportunity costs.

Area 37 – general overview

In Area 37 there are complete or incomplete time series for 315 segments. The data coverage is lower with 75 fleets included. 45 of these showed an increasing trend, 29 a decreasing trend and 1 with no significant trend.

The status in 2013 was assessed for 107 segments in Area 37 with 44 above the reference interest rate, 57 below and 6 not sufficiently profitable to cover their opportunity costs of fishing.

OFR – general overview

In OFR there were complete or incomplete time series for 85 segments. Trends were analysed for 15 segments, 8 of these showed an increasing trend and 7 a decreasing trend.

The status in 2013 was assessed for 22 segments in OFR with 10 above the reference interest rate and 12 below.

Belgium (BEL)

RoFTA could be calculated for 7 Belgian segments for 2013. For 2 Belgian fleet segments RoFTA was above the reference interest rate. For 1 segment RoFTA was below the reference interest rate, but still positive, while for 4 segments RoFTA was negative. The overall trend in 2009-2013 for the 4 segments with negative RoFTA was decreasing, while an increasing trend was assessed for 2 of the remaining segments.

Two of the fleet segments with negative RoFTA are amongst the most important.

Bulgaria (BGR)

RoFTA indicator was calculated for 2 fleet segments (drift net DFN VL06-12 and polyvalent mobile and passive gears PMP VL12-18m).

In both fleet segments, RoFTA is below the interest rate and the trends are increasing. **However, DCF economic data submitted by Bulgaria was flagged as unreliable.**

Croatia (HRV)

Due to the recent entry of Croatia into the EU there is a maximum of two years of data. Data for the two years was available for 15 fleet segments. Of these, 13 showed an increasing trend in RoFTA while two showed a decreasing trend. There was data on 2013 status for 23 segments (7 fleet segments only had 1 year of data). 14 of these were below the reference interest rate and 7 were above. Of the 15 with trends, 9 were below and 5 were above the reference interest rate. Of the 9 segments below the reference interest rate, 7 had an increasing trend.

Of the main segments - PS VL1218, PS VL1824 and PS VL2440 were deemed above the reference interest rate with a positive trend.

Cyprus (CYP)
RoFTA could be estimated for 6 Cypriot fleet segments in 2013. 5 fleet segments had an indicator value below the reference interest rate, and 1 (PG VL0006) was in a borderline situation (i.e. not sufficiently profitable). However, these results should be considered with caution as the reliability of the data submitted was deemed questionable.

Denmark (DNK)
ROI could be calculated for 19 Danish fleet segments. ROI results for 6 fleet segments were above the reference interest rate, 2 segments were below but still positive, while ROI for 11 segments were negative. For 18 segments an increasing trend could be assessed for ROI, while a decreasing trend was observed for only one segment.

The most important Danish fleet segments achieved positive ROI in 2013, with two of them being considerably above the reference interest rate.

Estonia (EST)
Because of the existence of fishing rights, time series of both ROI and RoFTA were provided.

The ROI was above the interest rate for all the 4 fleet segments for which the indicator could be calculated, including the PG – Passive Gears 00-10m and the TM - Pelagic Trawlers 24-40, which are the most important fleets at national level. The RoI is increasing for 2 fleet segments including the PG 00-12m. It is decreasing for the last 2 including the TM 24-40m.

Finland (FIN)
The Finnish fleet is divided into 6 DCF segments, and the RoFTA was available for 5 of these. The RoFTA for one segment was above the reference interest rate, whilst the RoFTA indicator values for the remaining four segments are below 0. One of the most important segments, PG VL0010, showed a decreasing trend while for two other segments, TM 1824, TM 2440, ROFTA was increasing. An additional two segments showed an increasing trend. However, looking at the data for individual years it is clear that only TM VL2440 is characterised by a consistent increase (other segments are showing more variable RoFTA values, which increase in some years and decrease in others).

France (FRA)
Of the 25 French fleets operating in Area 27, 10 were above the threshold, 10 were below (i.e. making a negative return on the value of their fixed tangible assets), and the remaindering 5 were borderline cases, i.e. positive but below the reference value. In Area 37, of the 8 French fleets reported, 5 were above, 2 were below the threshold and the remaining fleet was borderline. With regards to the fleet segments operating in French overseas territories, the single reported fleet segment (HOL VL1218) has suffered a reversal of fortune since 2012 and was now found to be below the threshold.

Germany (DEU)
Of the 13 active fleet segments for which data is available, the trends in RoFTA are overall positive: 10 segments have an increasing trend, 2 an insignificant trend, and only 1 segment has a decreasing trend. While this is postive, the 2013 status according to the guidelines

shows that 7 segments are above the reference interest rate, and 6 are below the reference interest rate. 5 of the segments below the reference interest rate show an increasing trend over the years with 1 segment showing a decreasing trend in RoFTA (DEU AREA27 DFN VL2440).

The DTS VL2440 segment status for 2013 is above the reference interest rate with an insignificant trend. The DTS VL40XX segment status for 2013 is below the reference interest rate with an increasing trend. The TBB VL1218 segment status for 2013 is above the reference interest rate with an increasing trend.

Greece (GRC)
No indicators were available for Greece.

Ireland (IRL)
RoFTA could be calculated for 8 Irish segments for 2013. For 5 of 6 Irish fleet segments RoFTA was above the reference interest rate and for 1 RoFTA was not above the reference interest rate. The overall trend over the 6-year period assessed was increasing for all 8 Irish segments. It has to be stressed that some values assessed for RoFTA exceeded 300, and even 1000, and thus appear unrealistically high.

Italy (ITA)
Following the DCF segmentation Italy reported in 2013 data on ROFTA for 21 fleet segments. In 12 of these segments the indicator shows returns above the reference interest rate, while for 9 it is below 0. Due to different clustering, trends over 5 years data are not available for all 21 segments. Only 5 of the 20 (1 segment was left out of the trend analysis) show an increasing trend.

Latvia (LVA)
Only 4 Latvian fleets reported sufficient data for 2014 to enable RoFTA to be calculated. Three are showing a positive return and are above the threshold. The fourth (TM VL1218) is below. In all cases the position is less favourable than for 2013, but the results for PGP VL0006 remain implausible, despite the low capital input in this fleet.

Lithuania (LTU)
RoFTA indicator was calculated for 5 fleet segments; RoFTA is above the interest rate in 4 fleet segments, below zero in 1 fleet segment. Over the period, RoFTA is increasing for 3 segments and getting worse for 2 segments.

With regards to the three most important segments, the RoFTA indicator is below the threshold for one (DTS 24-40m), and above the threshold for the other two (PG 00-10m and TM 40XXm; long distance fleet).

Malta (MLT)
ROI and RoFTA are provided, but as ROI is available for a lower number of fleet segments, RoFTA is considered for all of the Maltese fleet segments.

Of the 12 fleet segments for which the indicator could be calculated in 2013, the RoFTA is above the interest rate for 7 segments and negative for 5 segments. Over the period 2009-2013, the RoFTA is increasing for 8 segments and getting worse for 3 segments.

Among the three major fleet segments (HOK-Hook 06-12m, HOK-Hook 18-24m and DTS Demersal Trawls and Seine 18-24 m) pointed in the AER 2015, the RoFTA is above the interest rate only for the HOK 06-12m segment. However the RoFTA trend is increasing for all of these major fleet segments.

Netherlands (NLD)

Both RoI and RoFTA could be calculated for the Dutch fleet, therefore the RoI indicator was analysed.

In 2013 ROI indicator values could be calculated for 9 out of a total of 14 active fleet segments. 7 show an increasing trend, 1 a decreasing and 1an insignificant trend. The status of 6 segments in 2013 shows that they are above the reference interest rate, 2 are below the reference interest rate, while one segment is borderline. Of the two below the reference interest rate, 1 has an increasing trend while the other has a decreasing trend.

Of the main segments identified by the AER 2015 the NLD AREA27 TBB VL40XX has no data for 2013 and so its trend and status cannot be calculated. The NLD AREA27 TM VL40XX shows a decreasing trend and is below the reference interest rate in 2013. The NLD AREA27 TBB VL1824 has no data for 2013 and so trends and status cannot be calculated.

Poland (POL)

Due to incomplete time series, trends have been assessed for 6 segments out of a total of 19 active fleet segments in 2013. All of these segments show a decreasing trend. The 2013 status could been calculated for 7 segments, of which 3 are above the reference interest rate, 2 are below the reference interest rate and 2 are characterized as borderline.

Of the main segments identified in the AER 2015, POL AREA27 DTS VL1824 is above the reference interest rate with a decreasing trend. The POL AREA27 PG VL0010 is borderline and has a decreasing trend. The POL AREA27 TM VL2440 is also borderline with a decreasing trend.

Portugal (PRT)

RoFTA was available for 52 fleet segments, divided by regions distinguishing Azores (AZO), Madeira (MAD) and Portugal (PRT). Overall, positive returns above reference interest rate are reported for 30 segments, 16 segments show negative results (below 0) and 6 are characterized as non-sufficient returns (between 0 and the reference interest rate). The trend analysis reveals for 24 segments a decreasing, for 27 an increasing trend.

Separating AZO and MAD from PRT gives the following result: from the 8 segments of AZO 4 are showing positive returns, 2 negative and 2 are showing non-sufficient returns. There is a decreasing trend for 6 and increasing trend for 2 segments. For MAD 4 out of 6 segments show a positive return, 2 a negative. For 2 segments the indicator shows a decreasing, for 4 segments increasing trend. For PRT this means that 22 segments showing positive returns, 12 segments negative returns while 4 are in in the situation of non-sufficient returns. Additionally, 16 segments show a decreasing, 17 an increasing trend.

From the three most important segments (all area 27) identified by the AER 2015, PRT DTS VL 2440 is showing negative returns, PRT DTS VL 40XX positive returns and AZO PGP VL0010 is in borderline condition. DTS VL 2440 and PGP VL0010 reveal a decreasing trend while DTS VL40XX shows an increasing trend.

Romania (ROU)
RoFTA could be calculated for 3 Romanian segments for 2013. For 2 Romanian fleet segments RoFTA was above the reference interest rate. For 1 segment RoFTA was below the reference interest rate, but still positive. The overall trend over a 5-years period was assessed increasing for 2 of these segments and decreasing trend was assessed for the third segment.

Slovenia (SVN)
RoFTA indicator was calculated for 3 fleet segments; RoFTA is above the interest rate in 2 fleet segments and below zero in 2 fleet segments.

RoFTA trends were estimated for 3 fleet segments, of which 2 showed an increasing trend over the period 2008-20113 and 1 fleet segment revealed a decreasing trend.

With regards to the most important fleet segments identified by the 2015 AER, estimations show that the segment using purse seines (LOA 12-18 m) is profitable in the long term as the RoFTA is above than the interest rates. The segment using demersal trawls (LOA 12-18) is also improving its trend with the RoFTA in 2013 that is above the interest rates. The RoFTA of the fishing segments using drift and fixed nets (LOA 0-6 m and LOA 6-12 m) is negative, with an increasing trend for the segment 0-6m and a decreasing trend for the segment 6-12m.

Spain (ESP)
The RoFTA indicator was calculated for 52 fleet segments; RoFTA is above the interest rate in 24 fleet segments, below zero in 27 fleet segments; one fleet segment is borderline.

RoFTA trends were estimated for 31 fleet segments, of which 19 showed an increasing trend over the period 2008-20113, 12 fleet segments revealed a decreasing trend.

Focusing on the three major fleet segments identified by the 2015 AER, the RoFTA indicator is above the threshold for purse seine over 40m - Other Fishing Regions, and below the threshold for the other two (demersal trawl/seine 24-40m - North East Atlantic, and demersal trawl/seine 24-40m –Mediterranean).

Sweden (SWE)
Of the 7 fleet segments for which the indicator could be calculated in 2013, the RoFTA is above the interest rate for 4 segments, negative for 2 segments and between 0 and the interest rate for the last 1. Over the period, the RoI is increasing for 4 segments and getting worse for 3 segments.

This decreasing trend is also affecting the major fleets identified by the AER 2015, DTS Demersal Trawls and Seine 18-24 m and 24-40m, although the RoFTA indicator values of these fleet segment are still above the interest rate in 2013.

United Kingdom (GBR)
Because of the existence of fishing rights, both ROI and RoFTA could be calculated. For the two indicators, time series are complete over the period 2008 to 2013.

Of the 26 fleet segments for which the indicator could be calculated in 2013, the RoI is above the interest rate for 17 segments, negative for 5 segments and between 0 and the interest rate

for the last 4. Over the period, the RoI is increasing for 15 segments and getting worse for 11 segments.

Focusing on the three major fleet segments identified by the 2015 AER (TM-Pelagic Trawl>40m, DTS- Demersal Trawls and Seine 18-24 m and 24-40m), the ROI is above the interest rate and an increasing trend is evident for all of these fleet segments.

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

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

3.6.3.1 Method of Calculating and Presenting the CR/BER

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

Current revenue (CR) / Break Even Revenue (BER),
where,
CR = income from landings + other income
where,
BER = fixed costs / (1-[variable costs / current revenue])
and,
Fixed costs = non variable costs + annual depreciation
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 is 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.

The EWG decided pay particular attention to the issue of clustering; a discussion of clustering caveats is presented in section 3.12.1. In cases were sub-segments were included (e.g. Sweden) these could be taken into account.

Trends were calculated according to the filters detailed below for the years 2009 - 2013.

Table 3.6.2 - Methodology used to automatically generate comments on indicator trends.

Filter 1	Filter 2	Result
At least the last 2 consecutive years with data	Slope* >0.05	Increasing
	Slope* <-0.05	Decreasing

	-0.05=<Slope*=<0.05	No significant trend**
	Slope = 0	Flat / null
No data for 2012 and/or 2013		No conclusion (Null value)

* The slope is calculated with the intercept of the trend line / the first value of the trend (a/i0)

** A threshold of 5% is used to indicate whether the value is significant or not.

3.6.3.2 CR/BER Data Availability and Reliability

During the balance indicator table preparatory meeting which took place at JRC in June 2015 (see Annex I), experts highlighted several MS fleet segments for which indicator calculations appeared to be erroneous, or at least the results questionable.

Moeoever, the Annual Economic Report (AER) 2015 highlighted that the data coming from eight Member States (Bulgaria, Cyprus, Estonia, Ireland, France, Greece, Malta, Spain) was incomplete or unreliable. These MS were not taken into account in the EU and regional trend analyses presented by the AER 2015. In many of these cases this ‚incompleteness' is due to small-scale fleet segments that do not legally have to declare landings. Other reasons could be the lack of provision of economic cost data for every DCF segment that has declared landings (and hence revenue) as a result of low sample sizes, which prohbit coverage of all segments.

The following information on data availability and reliability was extracted from the STECF Annual Economic Report for 2015[18] (hereafter AER 2015), and / or MS fleet reports where relevant. Issues highlighted in the AER 2015 will have a direct influence on the values of the 2015 balance indicator tables (since the AER is the data source for economic and technical balance indicators). EWG 15-17 can not ascertain with certainty whether issues raised by MS will also have influenced balance indicator values provided to experts during the balance EWG. EWG 15-17 nevertheless considers issues related to indicator calculations identified in MS fleet reports to be relevant since MS may flag important problems which should be taken into account when interpreting indicators.

<u>Bulgaria (BGR)</u>

According to the AER 2015 (p. 173): '*In 2013, the Bulgarian fleet was clustered in 3 segments: Drift net 06-12 (1137 vessels), Polyvalent mobile and passive gears 12-18m (49 vessels), and Pelagic Trawl 18-24 (18 vessels). As clustering is quit e varying across years, comparisons are not possible.*'

EWG 15-17 considers that the analysis of trends is not reliable due to the inconsistently clustered fleet segments throughout the time series.

<u>Estonia (EST)</u>

The STECF 15-02 report referred to "*an Estonian fleet segment operating in OFR (EST OFR DTS VL40XX)*" (p. 54). According to the AER 2015 (p. 210): '*Due to confidentiality issues,*

[18] Scientific, Technical and Economic Committee for Fisheries (STECF) – The 2015 Annual Economic Report on the EU Fishing Fleet (STECF-15-07). 2015. Publications Office of the European Union, Luxembourg, EUR XXXX EN, JRC XXX, 434 pp.

the data for the deep-sea fleet (DTS VL40XX) are not reported. There were only three companies operating with 6 vessels in this segment. The effort data are missing for the coastal fisheries segments (PG VL0010 and PG VL1012) because they were not available.' This fleet also appears in the Estonian fleet report (p. 3), but on p.7 it is stated that '*Under the DCF, the data on expenditure, income and capital value for distant water fleet segment (length class VL40XX) is not included as the number of active vessels in this length class is too small and it is not possible to consolidate the segment with other fleet segments*'.

In addition EWG 15-17 notes that the status and trends of CR/BER for the TM 24-40m should be considered with caution because this fleet segment is a cluster regrouping TM, DTS and DFN 24-40 m and TM 18-24m.

Germany (DEU)

The German fleet report (p. 16) notes: '*The CR/BER indicator (ratio between current revenue and break-even revenue) was calculated by incorporating the opportunity costs of the capital. In the case of Germany, there would be no significant difference if the opportunity costs were left out because of the low interest rate to be applied. This indicator includes values for depreciation that are significantly higher than the figures that are actually to be applied within the enterprises. This is attributable to the method stipulated for determining the value of the vessels ('perpetual inventory method', PIM), which results in a considerable overestimation*.'

Malta (MLT)

The AER 2015 mentions some questionable data on effort and employment but also (p305) "*the data related to income values are not consistent with landing values for some years (in particular in 2013)."* The AER further recommends to take caution when considering data submitted by Malta and the indicators produced using them, as these were deamed to be unreliable and of questionable coverag and quality by experts. Hence, CR/BER values are provided in the balance indicator tables but were not considered further

Netherlands (NLD)

Values for the CR/BER indicator are below 1 for the Dutch pelagic fleet. However according to the Dutch fleet report (p.12): '*because the pelagic fleet is vertically integrated in companies the calculated losses do not mean that the sector is unprofitable: the prices used to calculate revenue are "theoretical" prices as the fish is not sold in auction but traded directly by the companies. However we do not take into account the revenue of final transformed product (because their prices are unknown to us), but the revenue at "first sale".*

EWG 15-17 notes that if the final output price of the value-added product was known, RoI estimates would likely be more positive.

Spain (ESP)

According to the AER 2015 (p. 370) "*data collection for Spain could be difficult due the size and complexity (by fishing areas and technology) of the Spanish fishing fleet, and quality has been increasing over time, but it has still not achieve the desired levels, and further work should be addressed to improve data collection system, quality and coverage of the data provided*".

Sweden (SWE)

EWG 15-17 notes that the status and trends of CR/BER for the DTS 18-24 and 24-40m should be considered with caution because these fleets are in reality clusters regrouping a variety of fleets.

The trend analysis should also be considered with with caution since the AER 2015 (p. 386) points out that "*The introduction of a tradable fishing right system has affected the 2010 data. Half of the vessels that had more than half of the total landings value left the fleet. There are most probably incomes in the 'other income' variable that result from selling quotas. The effect is that the profitability of 2010 is higher than it should be*".

United Kingdom (GBR)
With regards to the UK chapter the AER 2015 states that (p. 395) '*There have been no significant data issues in producing this chapter, and the coverage and quality appear to be good.*'.

However, EWG 15-17 notes that CR/BER were not available for the fleet segments involved in OFR supra region. Moroever, the status and trends of CR/BER for the DTS 18-24 m and 24-40m should be considered with caution because they are clustered fleets. DTS 18-24m is regrouping 18-24 m of DTS, PS and TM and DTS 24-40 is regrouping 24-40m of DTS and TM.

3.6.3.3 CR/BER Indicator Findings

Overall, CR/BER trends were estimated for 290 fleet segments out of a total of 932, of which 127 showed an increasing CR/BER trend over the period 2010-2012, 100 fleet segments revealed a decreasing trend, and 63 showed no significant trend.

Area 27 – general overview
In Area 27, of the 200 fleet segments for which CR/BER trends were calculated, 78 showed an increasing trend, 63 showed a decreasing trend, and 59 showed no significant trend.

Area 37 – general overview
In Area 37, data coverage of MS fleets is lower with 75 fleets included. 41 fleet segments showed an increasing CR/BER trend, 31 a decreasing CR/BER trend and 3 fleet segments revealed no significant CR/BER trend.

OFR – general overview
In Other Fishing Regions data was only available for 15 fleet segments. 8 of these fleet segments showed an increasing CR/BER trend, 6 a decreasing trend, and 1 showed no significant trend.

Belgium (BEL)
CR/BER could be calculated for 7 Belgian segments for 2013. For 2 Belgian fleet segments CR/BER was above 1. For 3 segments CR/BER was between 0 and 1, while for 1 segment CR/BER was negative. The overall trend in 2009-2013 was increasing for 1 segment, decreasing for 1 segment and insignificant for 4 segments.

Two of the segments with CR/BER below 1 are amongst the more important Belgian fleet segments identified by the AER 2015.

Bulgaria (BGR)
The two fleet segments for which the CR/BER ratio could be estimated (drift net 06-12m and polyvalent mobile and passive gears 12-18m) have an indicator value below 1.

The fleet segment Drift net 06-12 in Area 37 shows an increasing trend; whilst for the fleet segment polyvalent mobile and passive gears 12-18m, the CR/BER indicator decreases in 2009-2013.

Croatia (HRV)
Of the 15 segments for which data 2012 and 2013 data is available, 12 show an increasing trend in CR/BER while 3 show a decreasing trend. Of the 23 segments for which status could be assessed for 2013 14 are out of balance and 9 are in balance according to the criteria and thresholds of the 2014 Balance Indicator Guidelines. Of the 15 segments with trends, 9 are out of balance and 6 in balance according to the criteria and thresholds of 2014 Balance Indicator Guidelines. Of these 9 out of balance only, 3 have a decreasing trend, and the rest had and increasing CR/BER trend.

The main segments identified by the AER 2015, HRV AREA37 PS VL2440, HRV AREA37 PS VL1824, and HRV AREA37 PS VL1218 were all are assessed to be in balance with a positive CR/BER trend according to the criteria and thresholds of 2014 Balance Indicator Guidelines.

Cyprus (CYP)
Of the 10 active Cypriot fleet segments, only one, VL0006, has a CR/BER above 1, indicating that revenue is equal or higher with fishing costs. However this has decreased compared to 2012. Four segments had a CR/BER below 1. Trends indicate a generally worsening situation across the fleets, which all operate in Area 37. However this trend needs to be considered with caution since there are some outliers in the time series (i.e. data quality may be questionable).

Denmark (DNK)
CR/BER could be calculated for 19 Danish segments for 2013. For 9 Danish fleet segments CR/BER was 1 or above 1. For the other 9 segments CR/BER was between 0 and 1. The overall trend in 2009-2013 was assessd as increasing for 13 segments, decreasing for 2 segments and insignificant for 4 segments.

The three Danish segments which were identified as the most important Danish fleet segments by the AER 2015 were assessed to have a CR/BER above 1.

Estonia (EST)
The CR/BER is above 1 for all 4 fleet segments for which data was available to calculate the indicator, but the trends are different. Focusing on the major fleets identified by the AER 2015, the CR/BER is decreasing for the TM Pelagic Trawlers 24-40m fleet segment, while no significant trends are observed for the PG Passive Gears 00-10m fleet segment.

Finland (FIN)
The CR/BER indicator could be calculated for the 5 active Finish fleet segments in 2013. In these segments the CR/BER indicator was above 1 for 4 fleet segments, and below 1 for 1 fleet segment.

With regards to the most important segments identified by the AER 2015, the fleet segment PG VL0010 shows no significant trend whilst TM 1824 and TM 2440, show an increasing trend in the CR/BER indicator.

France (FRA)

Of the 55 French fleets operating in Area 27, i.e. the North East Atlantic, 15 had a CR/BER indicator value above 1, whilst insufficient data was available for the remaining segments to estimate the CR/BER in 2013. Generally there is no significant trend in revenue levels relative to break-even levels.

Of the important fleets identified by the AER 2015, the demersal trawler/seiner segments for both 12-18m and 18-24m showed a general position of being below 1, not meeting break-even levels of revenue. The drift/fixed net segments for 10-12m and 12-18m are above 1.

There are an additional 31 French fleets operating in Area 37, the Mediterranean Sea: 3 fleets had a CR/BER ratio greater than 1 and thus have revenue levels greater than the break-even level. 5 fleet segments had a CR/BER indicator value less than 1.

Only 1 of the fleet segments in the French overseas territories could be assessed. Its CR/BER ratio was below 1, indicating that current revenue is insufficient to meet the break-even level.

Germany (DEU)

Of the 13 active fleet segments which could be assessed, the trends in CR/BER are increasing for 7 segments and show no significant trend for the remaining 6 segments. The status shows 6 segments which are out of balance, and 7 which are in balance according to the criteria and thresholds of 2014 Balance Indiator Guidelines. Of the 6 segments out of balance there are no significant trends for the period 2009-2013 for 4 segments, and increasing trends for 2 segments.

With regards to the most important fleet segments identified by the AER 2015, the DTS VL2440 segment status is in balance in 2013 according to the criteria and thresholds of 2014 Balance Indiator Guidelines, with an insignificant trend in 2009-2013. The DTS VL40XX segment status is out of balance in 2013 according to the criteria and thresholds of 2014 Balance Indiator Guidelines, with an insignificant trend in 2009-2013. The TBB VL1218 segment status is in balance in 2013 according to the criteria and thresholds of 2014 Balance Indiator Guidelines, with an increasing trend in 2009-2013.

Greece (GRC)

No indicators for were available for Greece.

Ireland (IRL)

The CR/BER indicator could be calculated for 11 Irish segments for 2013. For 10 Irish fleet segments CR/BER was above or close to 1. For 1 segment CR/BER was close to 0. The overall trend in 2009-2013 was assessd to be increasing for 6 segments, decreasing for 3 segments and insignificant for 2 segments.

For two of the three most important Irish segments identified by the AER 2015, CR/BER was above 1, for the third segment CR/BER was close to 1 (0.9). For these three segments an increasing trend was observed in 2009-2013.

Italy (ITA)
For the reference year 2013 the CR/BER indicator could be calculated for 23 fleet segments. 14 of these fleet segments were assessed as being in balance according to the criteria and thresholds of the 2014 Balance Indicator guidelines, and the remaining 9 fleet segment are out of balance. With regards to trends in 2009-2013, 15 fleet segments had a decreasing trend, 5 had an increasing trend and 2 fleet segments had no significant trends. No trends could be calculated for one of the fleet segments.

Latvia (LVA)
The four Latvian fleets analysed during the period 2008 – 2014 demonstrate different trends. For three fleet segment indicator values are above 1. The results for the PGP VL0010 fleet look more realistic for 2014 (13.7) than the implausibly high ratio of 2013 (73.3). The fleet fleet segment with CR/BER indicator values below one in the reference year 2013 is TM VL1218.

Lithuania (LTU)
The majority of CR/BER ratios calculated for Lithuanian fleet segments operating in Area 27 are above 1 (4 are more than 1 and one fleet segment is less than one).

The only Lithuanian fleet segment fishing in Other Fishing Regions (OFR) for which data was available to calculate the CR/BER indicator (LTU OFR TM VL40XX) has positive indicator values in 2013.

CR/BER trends were estimated for 5 fleet segments, with 3 fleet segments showing an increasing trend and 2 fleet segments showing a decreasing trend.

Among the most important fleet segments identified by the AER 2015, only DTS 24-40m shows a CR/BER below one and a decreasing trend over the period. For the other two most important fleet segments (PG 00-10m and TM 40XXm, long distance fleet) the indicator is above one, and the trend is increasing.

Malta (MLT)
Of the 12 fleet segments for which the indicator could be calculated in 2013, the CR/BER is above 1 for 7 segments and equal or below 1 for 5 segments. The CR/BR is increasing over the 2009-2013 period for 8 segments and decreasing for 3 (there is no time series for 1 fleet segment so trends could not be assessed).

Among the three major fleet segments identified by the AER 2015 (HOK-Hook 06-12m, HOK-Hook 18-24m and DTS Demersal Trawls and Seine 18-24 m), the CR/BR is above 1 only for the HOK 06-12m segment. However indicator trends are increasing for all of the important fleet segments.

Netherland (NLD)
CR/BER indicator values could be calculated for all active fleet segments for the years 2008-2014. With regards to the trends analysis (years 2009-2013), 8 segments show an increasing trend, 5 segments show an insignificant trend and 1 shows a decreasing trend. 12 segments had an indicator value above 1 in 2013, and 2 fleet segments had an indicator value below 1. Of the two segments below 1 one has a decreasing trend, and the other an increasing trend.

Of the main segments identified by the AER 2015, the NLD AREA27 TBB VL40XX shows no significant trend and is above 1 in 2013. The NLD AREA27 TM VL40XX shows a decreasing trend and is below 1 in 2013. The NLD AREA27 TBB VL1824 has an increasing trend and is above 1 in 2013.

Poland (POL)

The CR/BER indicator for 2013 could be assessed for 7 Polish fleet segments; 5 fleet segments were in balance and 2 were out of balance according the criteria and thresholds of 2014 Balance Indicator Guidelines. Trends were decreasing for all the fleet segments which were assessed.

Of the main segments identified by the 2015 AER POL AREA27 DTS VL1824 is above 1 with a decreasing trend. The POL AREA27 PG VL0010 is above 1 and has a decreasing trend. The POL AREA27 TM VL2440 is also above 1 with a decreasing trend.

Portugal (PRT)

From overall 52 segments, divided by regions distinguishing Azores (AZO), Madeira (MAD) and Portugal (PRT), the CR/BER is above 1 for 36 segments while 16 segments are below. A decreasing trend is observable for 22 segments, while 11 segments show an increasing trend. 12 segments are classified with a non-significant trend.

Distinguishing between AZO, MAD and PRT shows the following results: 6 segments of the AZO have a value above 1, 2 below. 5 of these segments show an increasing trend, for 3 it is not significant. For the fleet from MAD 4 segments show an indicator value above 1, 2 below and the trend analysis reveals 4 segments with increasing, two segments with decreasing trends. This means for the PRT part of the fleet that 26 segments show an indicator value above 1, 12 below. Only 2 segments show an increasing, 20 a decreasing trend and for 9 segment the trend is not significant.

From the three most important segments (all area 27) identified by the AER 2015, for PGP VL0010 CR/BER is above 1 but shows a decreasing trend. For DTS VL2440 the indicator is below 1 with a decreasing trend while for DTS VL40XX shows an increasing trend with the indicator above 1.

Romania (ROM)

CR/BER could be calculated for 3 Romanian clustered fleet segments in 2013. For all these fleet segments CR/BER was above 1. The overall trend in 2009-2013 was assessd as increasing for 1 segment and decreasing for 2 segments.

Slovenia (SVN)

The CR/BER indicator is below 1 in two fleet segments (DFN 00-06m and DFN 06-12 m) and above 1 in the other two fleet segments for which the indicator was calculated (DTS 12-18m and PS 12-18m).

CR/BER trends were estimated for 3 fleet segments, with 2 fleet segments showing a decreasing trend and 1 fleet segment showing an increasing trend.

Spain (ESP)

Spanish fleet segments are characterized by fluctuating values of CR/BER in 2008-2013. In 2013, 27 fleet segments have CR/BER values under 1 and 25 fleet segments have an indicator value greater than 1.

CR/BER trends were estimated for 31 fleet segments, with 11 fleet segments showing an increasing trend, 16 fleet segments a decreasing trend and 4 fleet segments no significant trend.
For three most important segments identified by the AER 2015, CR/BER value is above 1 for purse seine over 40m -Other Fishing Regions, and below 1 for the other two (demersal trawl/seine 24-40m - North East Atlantic and demersal trawl/seine 24-40m –Mediterranean).

Sweden (SWE)
CR/BER indicator estimates were available for the 7 Swedish clustered fleet segments in 2013. The CR/BER is above 1 for 5 segments, including the two major fleets identified by the AER 2015 DTS 18-24m and DTS 24-40m, and equal or below 1 for 2 segments. The CR/BR is increasing over the period 2009-2013 for 3 segments, and decreasing for 2 fleets (including DTS 18-24m). There is no significant trend for a further 2 segments (including DTS 24-40m).

United Kingdom (GBR)
CR/BER indicator estimates were available for 26 UK clustered fleet segments in 2013. The CR/BER is above 1 for 22 segments and equal or below 1 for 4 segments. The CR/BR is increasing over the period 2009-2013 for 9 segments and decreasing for 8; no significant trends in CR/BR are observed for the rest of the fleets.

Focusing on the three major fleet segments identified by the AER 2015 (TM-Pelagic Trawl>40m, DTS- Demersal Trawls and Seine 18-24 m and 24-40m), the CR/BER is above 1 and increasing for all of them.

3.6.4 The Inactive Fleet Indicator

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

3.6.4.1 Method of Calculating and Presenting the Inactive Fleet Indicator

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

Trends were calculated according to the filters detailed below for the years 2009 - 2014.

Table 3.6.3 - Methodology used to automatically generate comments on indicator trends.

Filter 1	Filter 2	Result
At least the last 2 consecutive years with data	Slope* >0.05	Increasing
	Slope* <-0.05	Decreasing
	-0.05=<Slope*=<0.05	No significant trend**
	Slope = 0	Flat / null

No data for 2013 and/or 2014		No conclusion (Null value)

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

3.6.4.2 Inactive Fleet Indicator Data Availability and Reliability

Data for 2008-2014 are provided by most of the MS. 2014 data are not available for Denmark and France. Croatia, Latvia and Greece have limited time-series making trend analyses difficult and potentially misleading. For Sweden indicators for inactive fleet segments were only available for clustered segments.

3.6.4.3 Inactive Fleet Indicator Findings

General overview

For 7 MS (Bulgaria, Cyprus, Finland, Croatia, Malta, Portugal and Slovenia), there is a high level of inactivity over the period 2008 to 2014, which is confirmed by all inactive vessel indicator proportions which were calculated (i.e. the proportion of inactive vessels for the total fleet with respect to the number of vessels, GT and engine kW). However the majority of such inactive vessels measure less than 12 meters length overall (LOA); see section 3.11 for a detailed discussion of caveats related to assessing balance with regards to vessel use indicators in small scale fishing fleets

For 8 MS (Belgium, Spain, Estonia, France in 2013, Greece in 2013, Ireland, Italy and Poland) the percentages of inactivity were below 20% for all indicators.

Considering the trends from 2009 to 2014, the situation is getting better for Bulgaria, Malta and Finland. Inversely, it is getting worse for Portugal and Croatia.

Belgium (BEL)

For all length classes of the Belgian fleet the indicators of inactive vessels (number, GT, kW) ranged between 0 and 5% in the years 2008-2014. Due to the small size of the fleet, annual fluctuations in particular fleet segments might be due to one vessel changing its status. It was thus not considered reasonable to comment on trends.

Bulgaria (BGR)

In 2014, the percentage of inactive vessels remained high in most segments of the fishing fleet.

The percentage of inactive vessels, representing the unutilised capacity, was still rather substantial in the fleet segments less than 12 m in length.

In 2014, the percentage of inactive vessels on the total number of vessels in the segment 06-12m is approximately 30 %. The LOA 24–40 m segment continued to have no inactive vessels.

Croatia (HRV)

For all the Croatian inactive length classes there are increasing trends in 2009-2013, and all are in balance for the % of vessels indicator according to the criteria and thresholds of 2014 Balance Indiator Guidelines. This outcome is the same for the indicators of GT and kW inactivity.

Cyprus (CYP)
The inactive vessel component of the five fleets considered here is relatively low when taken individually, but overall the Cypriot fleet shows a high percentage of inactive vessels. The data indicate that the number of inactive vessels is decreasing. However, the rate of decrease is small and the principal group within the inactive vessels is that of the small VL0006 segment.

Denmark (DNK)
The proportion of inactive Danish vessels ranged from 23 to 37% in the 0-10m length class, with a decreasing trend. Except for 3 cases in 2008/2009 the percentage of inactive GT was below 3%. For kW the situation is similar:in the 0-19m length class the percentage fluctuates around 5 over the years; for all other length classes the level of inactivity is below 5%. The trends observed are overall decreasing or insignificant.

Estonia (EST)
Inactive vessels are present in two vessel size categories (12-18m and 24-40m). The inactive vessels account for a very small part of the total fleet, less than 1% in number, GT and kW. Moreover, the inactive vessel proportions are decreasing over the period.

Finland (FIN)
The Finnish fleet is divided into five fleet segments in Area 27. Nearly all of the inactive vessels are belonging to the under 10m category. This segment is out of balance while the other two are in balance according to the criteria and thresholds of 2014 Balance Indiator Guidelines. When it comes to GT the segment with the smallest vessels (PG VL0010) is in balance according to the criteria and thresholds of 2014 Balance Indiator Guidelines.

France (FRA)
The percentage of inactive vessels in French fleet segments is generally small, below 1%. Small vessels once again show the highest levels of inactivity, with the OFR VL0006 segment showing 10.2% for 2013. The fleet segments with the next highest levels of inactivity are the VL0010 group in Area 27 at 2.4%, and the VL0612 group in Area 37 at 1.9%. There are only few significant trends appear, and the rates of increase or decrease where such trends are evident are small.

Germany (DEU)
Inactive vessels exist in 5 vessel length classes in the German fleet. There are no significant trends for 3 of these classes, and a decreasing trend in 2009-2014 for 2 classes (the VL0010 and VL1218). Data is only available for 2 years for the largest vessel length class (VL40XX). The status for the 5 segments with complete data shows that the smallest class is out of balance, whilst all others are in balance according to the criteria and thresholds of 2014 Balance Indiator Guidelines.

When considering indicator results based on GT, the VL0010 shows an insignificant trend in 2009-2014, and the segment is in balance according to the criteria and thresholds of 2014 Balance Indiator Guidelines. Tends based on GT also change for the VL2440 class, from not significant to increasing. Results based on engine kW are similar to those obtained for GT, except for the VL0010 length class which shows an increasing trend.

Greece (GRC)

Inactive vessel indicator values available for Greece show a relatively low number of inactive vessels. When considering the percentage of inactive vessels 2 segments has a decreasing trend in 2009-2014 (VL0006 and VL0612), whilst the percentage remained the same for 1 segment (VL1218).

Ireland (IRL)
For all length classes of the Belgian fleet the indicators of inactive vessels (number, GT, kW) have ranged between 0 and 7% in the years 2008-2014. The trends observed in 2009-2014 are either insignificant or decreasing.

Italy (ITA)
For Italy the number of inactive vessels is relatively low. Therefore, the status of inactive fleet segments in 2014 based on the criteria and thresholds of 2014 Balance Indicator Guidelines is in balance for all fleet segments. Only one segment shows an increasing trend in 2009-2014 in the inactive kW category.

Latvia (LVA)
The only Latvian fleet segment with inactive vessels in 2014 is the VL0006 segment. The trend for this vessel length class is increasing in 2009-2014. However, between 2013 and 2014 a 2.5% fall in the number of inactive vessels in the fleet is reported.

Lithuania (LTU)
Inactive vessels exist in 6 vessel length classes in the Lithuanian fleet.

The values for the Lithuanian fleet show very low capacity use in 2014 (38%). The majority of the inactive vessels are small scale fleet segments measuring up to 10 meters. The segment VL0010 has the highest values for the number of inactive vessels (30% in 2014) but the values for GT and kW in the same segment are negligible.

The Inactive Fleet Indicator trend for the VL0010 segment shows a decreasing trend in 2009-2014.

Malta (MLT)
In 2014, five vessel length segments had inactive vessels (VL0006, VL0612, VL1218, VL1824, VL2440). These account for 32% of the total number of vessels, 33% of the total GT and 30% of the total kW. Based on the number of vessels and kW, the contribution of small vessels (less than 12m) is important. However when taking into account GT, the contribution of large vessels (18 to 40m) in the inactive fleet is predominant. Within the less than 12m vessel length class segment, the 00 to 06m segment is decreasing in number over the period while the 06-12m segment is increasing in number, GT and kW. The inactive fleet of large vessels (18 to 40m) is increasing when considering the proportion of inactive vessels based on GT.

Netherlands (NLD)
For the inactive length classes of the Dutch fleet there is no significant trend for 1 class (VL40XX), and an increasing trend for 5 classes (VL0010, VL1012, VL1218, VL1824, VL2440) when considering the inactive vessel indicator based on the % of inactive vessels. All vessel length classes are in balance according to criteria and thresholds of the 2014 Balance Indiator Guidelines. In terms of GT inactivity 4 classes show no significant trends and the two largest classes (VL2440, VL40XX) have an increasing trend. All classes are in

balance according to the criteria and thresholds of the 2014 Balance Indiator Guidelines. In terms of inactive kW the trends show 5 increasing and 1 with no significant trend. Again all classes are again shown to be in balance according to the criteria and thresholds of 2014 Balance Indiator Guidelines.

Poland (POL)

Of the 5 inactive length classes for which the inactive vessel indicator was calculated (VL2440, VL0010, VL1012, VL1218, VL1824; there are no inactive vessels in the vessel length class VL40XX), 4 length classes have sufficient information to assess status in 2014 while 3 have sufficient data to assess trends (the segment VL2440 has no data for 2014, while the 18-24m class has no data for 2012 and thus it was not possible to calculate a trend). 2 of the 3 classes show a decreasing trend with one showing an increasing trend. All four classes with status show that they are in balance in 2014 according to the criterian and thresholds of the 2014 Balance Indiator Guidelines. In terms of % of inactive GT the trends show 2 of 3 vessel length classes as decreasing (VL0010, VL1218), whilst the other vessel length classes having no significant trends. For this indicator all 4 classes were assessed to be in balance according to the criteria and thresholds of the 2014 Balance Indiator Guidelines. Finally when considering the proportion of inactive vessels with respect to engine KW, 2 of 3 vessel length classes had decreasing trends in 2009-2014, and 1 an increasing trend. All vessel length classes were in balance according to the criteria and thresolds of the 2014 Balance Indiator Guidelines.

Portugal (PRT)

There were 17 inactive vessel segments for the Portuguese fleet, with Portugal divided its fleet into overall 15 segments, with 6 segments from AZO, 5 from MAD and 6 for PRT. Generally the percentage of inactive vessels is quite low for the 17 segments and only the PRT VL0010 segment has a quite high percentage with over 50%. The trend analysis reveals no significant trend for 17 segments and only 1 segment is increasing (PRT VL0010). Regarding GT the large segments PRT VL2440 and PRT VL40XX show an increasing trend in 2009-2014, opposite to the non-significant trend when considering the proportion of inactive vessels with respect to the number of vessels (i.e. percentage of inactive vessels).

Romania (ROU)

Out of 5 vessel length class segments with inactive vessels in 2008-2014 (VL0006, VL0612, VL1218, VL1824, VL2440), the segments VL0006, VL0612, and VL1218 had inactive vessels in 2014. The overall percentage of number of inactive vessels had reached high values of 30- 53% for the 6-12m length class between 2009 and 2013. This figure dropped considerably to 18% in 2014. The same decreasing trend in 2009-2014 is also reflected in the GT and kW percentages. 4% of vessels in the 0-6m length class segment and 1% of vessels in the 12-18 m length class segment were inactive in 2014. The three fleet segments for which the inactive vessel indicator could be calculated for 2014 were all assessed as being in balance according to the criteria and thresholds of the 2014 Balance Indicator Guidelines.

Slovenia (SVN)

The results of the inactive fleet indicator show that around half of the vessels of the Slovenian fishing fleet were not active in 2014 (47%). Almost all of these vessels are shorter than 12 m (45 %).

The fleet segment DFN 0-6m accounts for 27% of the number of the vessels, but less than the 8% of the GT and less than the 6% of kW. For this fleet segment the level of inactivity is decreasing in the period 2009-2014.

Spain (ESP)
The Spanish fleet consisted of 6 inactive fishing segments; in 2014, the number of the inactive vessels is less than 20% for all the fleet segments.

The percentages of inactive vessels in terms of numbers are quite stable; nevertheless there is a small increase in kW and GT of inactive vessels in 2014 for the fleet segments which are larger than 24 meters.

Sweden (SWE)
In 2014, the 5 inactive Swedish vessel length class groups (VL0010, VL1012, VL1218, VL1824, VL2440) account for 23% of the total number of vessels, 7% of the total GT and 12% of the total kW. The contribution of small vessels (less than 12m) is important in number and kW, and it is increasing over the period for the less than 10m fleet.

United Kingdom (GBR)
In 2014, the six inactive UK vessel length class groups account for 31% of the total number of vessels, 11% of the total GT and 16% of the total kW. According to the number of vessels, the contribution of small vessels (less than 12m) is important, and increasing over the period. According to the GT, the contribution of large vessels (24-40m and up 40m) in the inactive fleet is predominant and also increasing over the period.

3.6.5 The Vessel Utilisation Indicator

According the indicator guidelines (COM (2014) 545 final) the 'Vessel Use Indicators' describe how intensively the ships in a fleet segment are being utilized. One of these Vessel Use Indicators is the Vessel Utlilisatio Indicator, also known as the Vessel Utilisation Ratio (VUR). This indicator concerns the average activity levels of vessels that did fish least once in the year, taking account of the seasonality of the fishery and other restrictions. Under normal conditions, it can be expected that 10% or less of the vessels in a fleet segment should be inactive, which could be due to major repairs, refits, conversions or pending sales and transfers. If more than 20% of the fleet segment is recurrently inactive or if the average activity level of vessels in a fleet segment is recurrrently less than 70% of the potential, workable activity of comparable vessels, this could indicate technical inefficiency, that may reveal the existence of an imbalance, unless it can be explained by other reasons, such as unexpected climatic or man-made events or emergency measures as foreseen in the CFP.

3.6.5.1 Method of Calculating and Presenting the Vessel Utilisation Indicator

Two sets of values for this indicator were included in the balance indicator tables prepared by JRC: VUR per fleet segment based on max DAS (Days At Sea) provided by MS, and VUR220 per fleet segment based on a common max DAS of 220. In cases were MS did not provid figures on max DAS, JRC applied 220 DAS as stipulated in the 2014 Guidelines.

Trends were calculated according to the filters detailed below for the years 2009 - 2013.

Table 3.6.4 - Methodology used to automatically generate comments on indicator trends.

Filter 1	Filter 2	Result
At least the last 2 consecutive years with data	Slope* >0.05	Increasing
	Slope* <-0.05	Decreasing
	-0.05=<Slope*=<0.05	No significant trend**
	Slope = 0	Flat / null
No data for 2012 and/or 2013		No conclusion (Null value)

* The slope is calculated with the intercept of the trend line / the first value of the trend (a/i0)

** A threshold of 5% is used to indicate whether the value is significant or not.

3.6.5.2 Vessel Utilisation Indicator Data Availability and Reliability

There was clear evidence that the concept of 'maximum days at sea' is not clear for several MS, and that different methodologies are used to calculate this parameter. In some cases MS indicator values are above 1 which is per definition impossible (it is not possible to spend more days at sea than the maximum declared DAS).

Where no data on maximum DAS was available the VUR-220 had to be considered as an alternative vessel utilisation indicator. However EWG 15-17 considers that this alternative is not suitable to assess balance for small scale fishing fleets. For a discussion of caveats related to assessing balance in small scale fishing fleets see section 3.11.

The following information on data availability and reliability was extracted from the STECF Annual Economic Report for 2015[19] , and / or MS fleet reports where relevant. Issues highlighted in the AER 2015 will have a direct influence on the values of the 2015 balance indicator tables (since the data source for both exercises is the same). EWG 15-17 can not ascertain with certainty whether issues raised by MS will also have influenced balance indicator values provided to experts during the balance EWG. EWG 15-17 nevertheless considers issues related to indicator calculations identified in MS fleet reports to be relevant since MS may flag important problems which should be taken into account when interpreting indicators.

<u>Estonia (EST)</u>

EWG 15-17 notes that the VUR indicator is available, but that the time series is only complete for 2 fleet segments (TM VL1218 and TM VL2440). EWG 15-17 further notes that VUR data are not provided for the PG 00-10m which is an important fleet segment in Estonia.

According to the AER 2015 (p. 2010): '*effort data are missing for the coastal fisheries segments (PG VL0010 and PG VL1012) because they were not available'.*

Moreoever, the STECF 15-02 report referred to "*an Estonian fleet segment operating in OFR (EST OFR DTS VL40XX)*" (p. 54). According to the AER 2015 (p. 210): '*Due to confidentiality issues, the data for the deep-sea fleet (DTS VL40XX) are not reported. There were only three companies operating with 6 vessels in this segment. The effort data are*

[19] Scientific, Technical and Economic Committee for Fisheries (STECF) – The 2015 Annual Economic Report on the EU Fishing Fleet (STECF-15-07). 2015. Publications Office of the European Union, Luxembourg, EUR XXXX EN, JRC XXX, 434 pp.

missing for the coastal fisheries segments (PG VL0010 and PG VL1012) because they were not available.' This fleet also appears in the Estonian fleet report (p. 3), but on p.7 it is stated that '*Under the DCF, the data on expenditure, income and capital value for distant water fleet segment (length class VL40XX) is not included as the number of active vessels in this length class is too small and it is not possible to consolidate the segment with other fleet segments*'.

Finally, EWG 15-17 considers that the status and trends of VUR for the TM 24-40m should be considered with caution because it is a cluster regrouping TM, DTS and DFN 24-40 m and TM 18-24m.

Malta (MLT)

EGW 15-17 notes that VUR indicator values are only available for 2013 and 2014. Moreover the Maltese fleet report (p. 5) cautions that VUR indicator results may not be reliable: '*the value of the average theoretical effort was relatively high (when compared with the actual effort of most vessels within the segment) due to the high numbers of fishing days carried out by one or two vessels within that segment.'.*

The VUR-220 indicator was calculated and is available in the MS balance indicator table, but given the fact that the majority of the Maltese fishing fleet is artisanal in nature (11 fleet segments have vessels which are less than 12m long) EWG 15-17 considers that it is unlikely that the VUR-220 indicator can be used to assess vessel utilisation in an accurate manner (see section 3.11). Indeed, the values of VUR 220 are very low (mostly less than 0.3) over the period for a large number of segment including over 12m fleet segments.

Portugal (PRT)

EWG 15-17 notes that the VUR indicator for 2013 was only available for 6 fleet segments from Madeira (out of a total of 55 Portuguese fleet segments).

Romania (ROU)

EWG 15-17 notes that both vessel utilisation indicators based upon both MS definition of maximum days at sea (VUR), and on 220 days at sea (VUR-220) appear to be unrealistically low (between 0.1 and 0.4).

United Kingdom (GBR)

EWG 15-17 notes that VUR indicator values are not available, so the VUR-220 had to be calculated by JRC as an alternative. However most of the fleet segments where the VUR 220 is below 0.7 belong to the UK small scale fleet, and EWG 15-17 considers that the VUR-220 indicator cannot be used to assess vessel utilisation for vessels in such fleet segments in an accurate manner (see section 3.11).

In addition the VUR220 below 0.7 for the TM >40 m should be considered carefully as pointed by the UK fleet report (p. 17) as these vessels "*are involved in highly seasonal and time limited pelagic fisheries. As such, this level of utilisation is not seen as indicative of an unsustainable level of activity."*

Finally EWG 15-17 cautions that the status and the trends of VUR 220 for the DTS 18-24 m and 24-40m should be considered with caution because they are clustered fleets. DTS 18-24m is regrouping 18-24 m of DTS, PS and TM and DTS 24-40 is regrouping 24-40m of DTS and TM.

3.6.5.3 Vessel Utilisation Indicator Findings

Due to the issues outlined in the section on data availability and reliability for the vessel utilisation indicator, EWG 15-17 considers that it is not appropriate to present information on vessel utilisation indicator findings by area. Findings for the individual MS are nevertheless presented below.

Belgium (BEL)

The vessel utilisation indicator based on the maximum DAS data provided by the MS is close to 1 for most Belgian segments. In some years values above 1.0 are calculated, indicating that the maximum days were not provided correctly. The vessel utilisation ratio based upon 220 days leads to a similar result – in some cases the values exceed 1.

No significant trends could be observed.

Bulgaria (BGR)

The VUR-220 has been calculated for 3 fleet segments: drift net 06-12m, polyvalent mobile and passive gears 12-18m and pelagic trawl 18-24m. All three fleet segments show a value below the threshold, and no significant trends are evident.

Croatia (HRV)

For the vessel utilisation indicator 18 segments have sufficient data for the assessment. 3 segments show a decreasing trend, 1 a decreasing trend, 1 a flat trend and 13 show no significant trend in 2009-2013. The status in 2013 is assessed for 23 segments, of which 21 are out of balance and 2 are in balance according to the criteria and thresholds of the 2014 Balance Indiator Guidelines. Of the 18 fleet segments with information on trends, all are out of balance according to the criteria and thresholds of the 2014 Balance Indiator Guidelines.

For the main segments identified by the AER 2015, HRV AREA37 PS VL2440 and HRV AREA37 PS VL1824, both are out of balance according to the criteria and thresholds of the 2014 Balance Indiator Guidelines. Both segments to not show any significant trend in 2009-2013. The segment HRV AREA37 PS VL1218 is out of balance according to the criteria and thresholds of the 2014 Balance Indiator Guidelines, with a flat/null trend.

Cyprus (CYP)

No vessel utilisation ratios have been reported for the Cypriot fleets. The VUR-220 indicator was calculated for 7 of the Cypriot active fleet segments, and all fleet segments are out of balance according to the criteria and thresholds of the 2014 Balance Indicator Guidelines.

Denmark (DNK)

A vessel ustilisation ratio based upon MS definition of maximum days at sea could not be provided. Using a reference value of 220 days as maximum a ratio of 0.7 or lower was calcualted for 15 out of 19 segments while 2 segments are above 1. No significant trends could be observed, except for two segments for which an increasing trend was evident in 2009-2013.

The utilisation ratios for three most important segments identified by the AER 2015 were between 0.8 and 1.4 (reference = 220 days).

Estonia (EST)
The VUR was available for only 2 of the active Estonian fleet segments for 2013. For both segments the VUR is above 0.7, and both segments were without significant trends over the period 2009-2013. These VUR time series include the TM Pelagic Trawl 24-40m fleet segments which accounts for one of the two major Estonian fleets identified in the AER 2015.

Finland (FIN)
The vessel utilisation ratio is well below 1 for all the assessed Finish fleet segments. The three largest segments are showing an increasing trend in the number of sea days per vessel in 2009-2013.

France (FRA)
Of the fleet segments reported for the French fleet operating in Area 27, in 2013 28 fleets are estimated to have a utilisation ratio below 0.7, and 8 are above 0.9. In Area 37, VUR for 18 fleet segments are below 0.7 while 9 are above 0.9. In the French overseas territories 6 segments are reported as below 0.7, 3 above 0.9, and one fleet segment is exactly 0.7 (i.e. at the indicator threshold).

Germany (DEU)
No significant trends can be seen for 11 of the 13 segments in the German fleet for the vessel utilisation indicator, while the 2 remaining show an increasing trend in 2009-2013. Based on the VUR indicator 10 segments are out of balance, and 3 are in balance in 2013 according criteria and thresholds of the 2014 Balance Indiator Guidelines.

Of the main segments identified by the AER 2015, the German fleet segment DEU AREA27 DTS VL2440 is out of balance according to criteria and thresholds of the 2014 Balance Indiator Guidelines with no significant trend in 2009-2013; the DEU AREA27 DTS VL40XX segment is in balance (in contrast to the economic indicators) with no significant trend; the DEU AREA27 TBB VL1218 segment is out of balance in 2013 according to criteria and thresholds of the 2014 Balance Indiator Guidelines, also in contrast to the economic indicators, again with no significant trend in 2009-2013.

Greece (GRC)
There was insufficient data available to calculate the VUR / VUR-220 indicators.

Ireland (IRL)
The vessel utilisation indicator based upon the MS definition of maximum days is below 0.7 for 9 out of 17 segments. When the vessel utilisation ratio is calculated based upon 220 days the general picture does not change, however in some cases the values exceed 1.

No significant trends could be observed for the majority of segments in 2009-2013.

Italy (ITA)
In 2014 3 segments have a utilisation ratio of 0.9-1.0, 4 segments were between 0.7 and 0.9 and all other segments (14) for which data was provided have a utilisation ratio below 0.7. All segments show no significant trend in the fleet utilisation ratio in 2009-2013.

Latvia (LVA)

No significant trend has been identified in the four Latvian fleet segments reported, but two are out of balance and two are in balance according to the criteria and thresholds of the 2014 Balance Indiator Guidelines.

Lithuania (LTU)

All the VUR-220 indicators calculated for Lithuanian fleet segments operating in Area 27 are below 0.7; the only Lithuanian fleet segment fishing in Other Fishing Regions (OFR) for which vessel utilisation indicator-220 could be calculated (LTU OFR TM VL40XX), has a vessel utilization indicator above 0.7.

VUR-220 indicators show one increasing trend, one decreasing trend and three no significant trends for 2009-2013.

Focusing on the three major fleet segments identified by the AER 2015 (DTS 24-40m, PG 00-10m and TM 40XXm long distance fleet), the VUR-220 indicator is above 0.7 only for TM 40XX long distance fleet. For the other two fleet segments, indicators are below 0.7 and the trends in 2009-2013 are no significant.

Malta (MLT)

For the 21 segments where the data are provided, the VUR-220 is below 0.7. The ratio is increasing for 4 segments, including the major fleet of HOK 18-24m. The VUR 220 is decreasing for 3 segments and no significant trends are observed for the rest of the fleet in 2009-2013, including the two major fleet segments of HOK 06-12m and DTS 18-24 m.

Netherlands (NLD)

No significant trends can be seen for 12 of the 14 Dutch segments in the vessel utilisation indicator for the period 2009-2013. One segment has a null/flat trend and one has a decreasing trend. Of the 14 segments, 12 are shown to be out of balance, and 2 are in balance according to the criteria and thresholds of the 2014 Balance Indiator Guidelines.

Of the main segments identified by the AER 2015 the NLD AREA27 TBB VL40XX has a vessel utlisation ratio below 0.7 with an insignificant trend in 2009-2013. The NLD AREA27 TM VL40XX shows a decreasing trend in 2009-2013, and is below 0.7 in 2013. The NLD AREA27 TBB VL1824 shows an insignificant trend in 2009-2013, and is also below 0.7 in 2013.

Portugal (PRT)

Portugal provided only data on maximum DAS for the fleet of the Madeira region for 6 segments. From these are 4 show a ratio below 0.7 while 2 are above 0.7 in 2013. However, there seems to be a change in 2014 where the value of the indicator for HOK VL1824 is 0.8 which would mean a positive development, opposite to MGP VL0010 where the indicator decreases to 0.7. 5 segments show no significant trend in 2009-2013. The fleet segment MGP VL0010 shows an increasing trend in 2009-2013.

Poland (POL)

As with the other indicators trends have been calculated for 6 segments and status for 7. All trends in the vessel utilisation are insignificant during the period 2009-2013. The indicators for all 7 segments are below 0.7.Therefore, for the main segments identified by the AER 2015, POL AREA27 DTS VL1824, POL AREA27 PG VL0010 and POL AREA27 TM VL2440 the indicator is below 0.7 with no significant trend.

Romania (ROU)
Vessel utilisation indicators based upon both MS definition of maximum days at sea and on 220 days at sea appear to be unrealistically low (between 0.1 and 0.4). As the input data appear to be erroneous EWG 15-17 considered futher interpretation to be inappropriate.

Slovenia (SVN)
The VUR is below 0.7 in all Slovenian fleet segments (DTS 12-18 m, DFN 0-6 m, DFN 6-12 m and PS 12-18m). Over the period 2009-2013, VUR trends are not significant.

Spain (ESP)
The VUR indicator was calculated for 60 fleet segments; in 2013, for 30 fleets segments the average activity level is less than 70% of the potential.

VUR trends were estimated for 41 fleet segments, of which 1 showed an increasing trend over the period 2009-2013, 4 fleet segments revealed a stable trend and 36 showed no significant trend.

VUR indicator is below 0.7 for all three most important fleet segments identified by the AER 2015 (purse seine over 40m -Other Fishing Regions, demersal trawl/seine 24-40m - North East Atlantic and demersal trawl/seine 24-40m –Mediterranean).

Sweden (SWE)
For the 7 segments where the data are provided, the VUR is above 0.7 for 2 segments (the two major fleets of DTS 18-24m and DTS 24-40m) and below 1 for the last 5 segments. The VUR is increasing for 1 fleet segment (DTS 18-24m) in 2009-2013; no significant trends are observed during the same period for the other fleet segments.

United Kingdom (GBR)
Of the 28 segments where the data were available to calculate the indicator, the VUR-220 is above 0.7 for 14 fleet segments and below 0.7 for 14 fleet segments (among which 10 fleets are belonging to the Small Scale Fleet). No significant trends are observed in the VUR-220 indicator for all the fleets.

Focusing on the major fleet segments identified by the AER 2015, the VUR-220 is above 0.7 for the DTS 18-24 m and 24-40m, but below 0.7 for the TM>40m. No significant trends are observed in the VUR 220 indicator for the three major fleets during the period 2009-2013.

3.7 Indicator Values by Area and Member State

Indicator values for the years 2008-2013/2014, comments on fleet segment status in 2013 according to the 2014 Balance Indicator Guidelines, and trends by supra-region (Area 27, Area 37, OFR) and MS can be downloaded from: http://stecf.jrc.ec.europa.eu/reports/balance

A colour coded summary of the status of each fleet segment in 2013 according to thresholds and criteria in the 2014 Balance Indicator Guidelines for each of the biological, technical and economic indicators is provided in the last columns of the indicator table. In light of the indicator calculation / interpretation issues, problems and caveats identified by several EWGs, including EWG 15-17, these results need to be interpreted with caution.

Summary of Results by Supra-Region

A total of 544 fleet segments (which may include clustered fleet segments) in the EU Member State fleets were covered in the analysis for the year 2013; 420 fleet segments were active and 124 were inactive segments. Area 27 had a total of 241 fleet segments, Area 37 a total of 138 fleet segments, and OFR 41 fleet segments.

An overview of fleet segment status in 2013 according to thresholds and criteria in the 2014 Balance Indicator Guidelines for each of the biological, technical and economic indicators assessed during EWG 15-17 is provided below. In light of the indicator calculation / interpretation issues, problems and caveats identified by several EWGs, including EWG 15-17, these results need to be interpreted with caution.

Table 3.7.1 - Fleet segment status based on technical, biological and economic indicators in Area 27, Area 37 and OFR in 2013 according to thresholds and criteria in the 2014 Balance Indicator Guidelines. Values in the table relate to the number of fleet segments in each status category. Many of the apparent "missing" values are due to fleet segment clustering by Member States, i.e. effort variables were submitted by clusters, and not by fleet segment.

Status in 2013 - according to 2014 Balance Indicator Guidelines									
Supra region	**Value**	**VUR**	**VUR 220**	**SAR**	**SHI**	**CR/BER**	**Profit margin**	**RoFTA**	**ROI**
AREA27	in balance	44	98	185	41	139	121	115	33
AREA27	out of balance	99	133	52	84	74	86	73	23
AREA27	not sufficiently profitable							19	8
AREA27 Total		**143**	**231**	**237**	**125**	**213**	**207**	**207**	**64**
AREA37	in balance	42	23	31	8	50	46	44	8
AREA37	out of balance	66	102	15	43	57	61	57	2
AREA37	not sufficiently profitable							6	1
AREA37 Total		**108**	**125**	**46**	**51**	**107**	**107**	**107**	**11**
OFR	in balance	10	19	9	1	10	10	10	1
OFR	out of balance	18	16	8		12	12	12	1
OFR Total		**28**	**35**	**17**	**1**	**22**	**22**	**22**	**2**

Summary of Results by Member State

An overview of Member State fleet segment status in 2013 according to thresholds and criteria in the 2014 Balance Indicator Guidelines for each of the biological, technical and economic indicators assessed during EWG 15-17 is provided in Table 3.7.2 below. An overview of the 2014 inactive vessel indicator results[20] for the fleet segments of the different Member State is shown in Table 3.7.3. In light of the indicator calculation / interpretation issues, problems and caveats identified by several EWGs, including EWG 15-17, these results need to be interpreted with caution.

[20] The inactive vessel indicator was the only indicator for which final 2014 data was available for all Member States.

Table 3.7.2 - Fleet segment status based on technical, biological and economic indicators in the different EU Member States in 2013 according to thresholds and criteria in the 2014 Balance Indicator Guidelines. Values in the table relate to the number of fleet segments in each status category. Many of the apparent "missing" values are due to fleet segment clustering by Member States, i.e. effort variables were submitted by clusters, and not by fleet segment.

	Status in 2013 - according to 2014 Balance Indicator Guidelines								
MS	Value	VUR	VUR 220	SAR	SHI	CR/BER	Net Profit margin	RoFTA	ROI
BEL	in balance	7	5	5		3	3	2	
BEL	out of balance		2	1	4	4	4	4	
BEL	not sufficiently profitable							1	
BEL Total		**7**	**7**	**6**	**4**	**7**	**7**	**7**	
BGR	in balance				1				
BGR	out of balance		3		16	2	2	2	
BGR Total			**3**		**17**	**2**	**2**	**2**	
CYP	in balance					1			
CYP	out of balance		7			5	6	5	
CYP	not sufficiently profitable							1	
CYP Total			**7**			**6**	**6**	**6**	
DEU	in balance	3	5	9	1	7	7	7	
DEU	out of balance	10	8	2	8	6	6	6	
DEU Total		**13**	**13**	**11**	**9**	**13**	**13**	**13**	
DNK	in balance		6	5	2	9	8	8	6
DNK	out of balance		13	13	13	10	11	10	11
DNK	not sufficiently profitable							1	2
DNK Total			**19**	**18**	**15**	**19**	**19**	**19**	**19**
ESP	in balance	30	32	36	3	25	24	24	2
ESP	out of balance	30	28	19	10	27	28	27	6
ESP	not sufficiently profitable							1	
ESP Total		**60**	**60**	**55**	**13**	**52**	**52**	**52**	**8**
EST	in balance	2		1	2	4	4	4	4
EST	out of balance		2		3				
EST Total		**2**	**2**	**1**	**5**	**4**	**4**	**4**	**4**
FIN	in balance		1	3	3	1	1	1	
FIN	out of balance	5	4	1	1	4	4	4	
FIN Total		**5**	**5**	**4**	**4**	**5**	**5**	**5**	
FRA	in balance	13	27	53	7	18	15	12	
FRA	out of balance	52	38	13	15	16	19	16	
FRA	not sufficiently profitable							6	
FRA Total		**65**	**65**	**66**	**22**	**34**	**34**	**34**	
GBR	in balance		14	28	5	22	22	21	17
GBR	out of balance		14	5	10	4	4	4	5

GBR	not sufficiently profitable							1	4
GBR Total			**28**	**33**	**15**	**26**	**26**	**26**	**26**
GRC	out of balance					9	9	9	
GRC Total						**9**	**9**	**9**	
HRV	in balance	2	4	8		9	8	7	
HRV	out of balance	21	19	1	6	14	15	14	
HRV	not sufficiently profitable							2	
HRV Total		**23**	**23**	**9**	**6**	**23**	**23**	**23**	
IRL	in balance	4	5	12	7	9	7	7	
IRL	out of balance	13	12	4	4	2	3	1	
IRL	not sufficiently profitable							2	
IRL Total		**17**	**17**	**16**	**11**	**11**	**10**	**10**	
ITA	in balance	12	4	3	1	14	14	14	
ITA	out of balance	11	19	4	9	9	9	9	
ITA Total		**23**	**23**	**7**	**10**	**23**	**23**	**23**	
LTU	in balance		1	2		4	4	4	
LTU	out of balance	4	4	1	2	1	1	1	
LTU Total		**4**	**5**	**3**	**2**	**5**	**5**	**5**	
LVA	in balance	2	1	1	2	3	3	3	
LVA	out of balance	2	3		1	1	1	1	
LVA Total		**4**	**4**	**1**	**3**	**4**	**4**	**4**	
MLT	in balance	15				7	7	7	6
MLT	out of balance		21		1	5	5	5	2
MLT Total		**15**	**21**		**1**	**12**	**12**	**12**	**8**
NLD	in balance	2	5	13	1	12	7	7	5
NLD	out of balance	12	9		7	2	2	2	2
NLD	not sufficiently profitable								2
NLD Total		**14**	**14**	**13**	**8**	**14**	**9**	**9**	**9**
POL	in balance		2	6		5	3	3	
POL	out of balance	7	7	1	2	2	4	2	
POL	not sufficiently profitable							2	
POL Total		**7**	**9**	**7**	**2**	**7**	**7**	**7**	
PRT	in balance	2	26	24	3	36	31	30	
PRT	out of balance	4	26	5		16	21	16	
PRT	not sufficiently profitable							6	
PRT Total		**6**	**52**	**29**	**3**	**52**	**52**	**52**	
ROU	in balance					3	3	2	2
ROU	out of balance	3	3		3				
ROU	not sufficiently profitable							1	1
ROU Total		**3**	**3**		**3**	**3**	**3**	**3**	**3**
SVN	in balance					2	2	2	
SVN	out of balance	4	4		2	2	2	2	
SVN Total		**4**	**4**		**2**	**4**	**4**	**4**	
SWE	in balance	2	2	16	12	5	4	4	

SWE	out of balance	5	5	5	10	2	3	2	
SWE	not sufficiently profitable							1	
SWE Total		**7**	**7**	**21**	**22**	**7**	**7**	**7**	

Table 3.7.3 - Fleet segment status based on the inactive vessel indicator in each of the Member States in 2014 according to thresholds and criteria in the 2014 Balance Indicator Guidelines.

		Status in 2014 – according to 2014 Balance Indicator Guidelines		
MS		in balance	out of balance	NA
BEL	% of inactive N	2		1
	% of inactive GT	2		1
	% of inactive kW	2		1
BGR	% of inactive N	3	1	
	% of inactive GT	4		
	% of inactive kW	3	1	
CYP	% of inactive N	5		
	% of inactive GT	4	1	
	% of inactive kW	5		
DEU	% of inactive N	4	1	1
	% of inactive GT	5		1
	% of inactive kW	5		1
DNK	% of inactive N			6
	% of inactive GT			6
	% of inactive kW			6
ESP	% of inactive N	6		
	% of inactive GT	6		
	% of inactive kW	6		
EST	% of inactive N	1		1
	% of inactive GT	1		1
	% of inactive kW	1		1
FIN	% of inactive N	2	1	2
	% of inactive GT	3		2
	% of inactive kW	2	1	2
FRA	% of inactive N			26
	% of inactive GT			26
	% of inactive kW			26
GBR	% of inactive N	5	1	
	% of inactive GT	6		
	% of inactive kW	6		
GRC	% of inactive N			3
	% of inactive GT			3
	% of inactive kW			3
HRV	% of inactive N	5		

	% of inactive GT	5		
	% of inactive kW	5		
IRL	% of inactive N	5		
	% of inactive GT	5		
	% of inactive kW	5		
ITA	% of inactive N	5		3
	% of inactive GT	5		3
	% of inactive kW	5		3
LTU	% of inactive N	5	1	
	% of inactive GT	6		
	% of inactive kW	6		
LVA	% of inactive N		1	2
	% of inactive GT	1		2
	% of inactive kW	1		2
MLT	% of inactive N	5		1
	% of inactive GT	5		1
	% of inactive kW	5		1
NLD	% of inactive N	6		
	% of inactive GT	6		
	% of inactive kW	6		
POL	% of inactive N	4		1
	% of inactive GT	4		1
	% of inactive kW	4		1
PRT	% of inactive N	15	1	1
	% of inactive GT	16		1
	% of inactive kW	16		1
ROU	% of inactive N	3		2
	% of inactive GT	3		2
	% of inactive kW	3		2
SVN	% of inactive N	3	1	
	% of inactive GT	4		
	% of inactive kW	4		
SWE	% of inactive N	5		1
	% of inactive GT	5		1
	% of inactive kW	5		1

3.8 Future Considerations: Proposed Biological Indicators and Evaluation Tool

The Expert Group recognises that the overall purpose for Member States to report on balance between fleet capacity and fishing opportunities is to gain an insight into the impact each fleet segment is having on the stocks they exploit and the economic dependency they have on such stocks. Of particular importance is to evaluate these criteria in relation to the objective of exploiting all stocks at rates corresponding to F_{MSY}. In the short term, while the CFP objective of exploiting all stocks at rates that will deliver MSY may not yet have been

achieved, an assessment of the impacts and the economic dependency of fleets exploiting overharvested stocks may help to identify those fleet segments that may be out of balance with fishing opportunities and which may require some form of management action.

The STECF 15-02 report presented proposals for alternative indicators that may prove useful to Member States in assessing whether their fleet segments are in balance or not in balance with their fishing opportunities. The proposed indicators were as follows:

- EDI - economic dependency indicator
- NOS - number of overharvested stocks
- NSR - number of stocks at risk

The EDI and the NOS were proposed as alternatives to replace the SHI. The NSR was proposed as a replacement for the SAR indicator. Justification for the proposals, as well a proposed revised version of the guidelines are given in STECF 15-02 report and are not repeated here. After further consideration, the Expert group considers that while the SHI alone is not a particularly useful indictor of which fleet segments are likely to require management action in trying to achieve a balance between fleet capacity and fishing opportunities, there is some merit in retaining the SHI as it does provide some useful information if used in conjunction with the EDI and the NOS indicator. Furthermore, the Expert Group also proposes to modify the method of threshold calculation for the NOS indicator. The proposed modification is presented below. The proposed NSR indicator has not been considered further in this report.

The Expert Group considers that used in combination, the above indicators can help Member States to identify problematic fleet segments that have both a major impact and a high economic dependency on overharvested stocks, thereby providing an indication on which fleet segments may need to be targeted for management action.

In preparing the indicators specified in the 2014 Balance Indicator Guidelines for this report, values for the EDI indicator listed above were also calculated. While the Commission did not specifically request that such indicator values be prepared or commented on in this report, the Expert Group considers that they may prove to be informative in assessing balance between capacity and fishing opportunities in the future. Hence, they will be made available online in as a supplementary data file as electronic annex (see section 6 of this report). However, the Expert Group recognises that MS are required to comply with the 2014 guidelines in their fleet reports unless revised guidelines are issued by the Commission at some future date.

The expert responsible for the calculation of the SHI values (Jerome Guitton), has developed an evaluation tool that may prove to be a useful aid to the Commission and Member States in addressing the issue of balance/capacity in the future. An example of the potential utility of the evaluation tool is explained below; Figure 3.8.1 summarises the relationship between the SHI and the EDI values for two hypothetical fleet segments.

The tool is available at:

Link: http://halieut.agrocampus-ouest.fr/sirs_cstep/

Login: atlas

Password: atlas

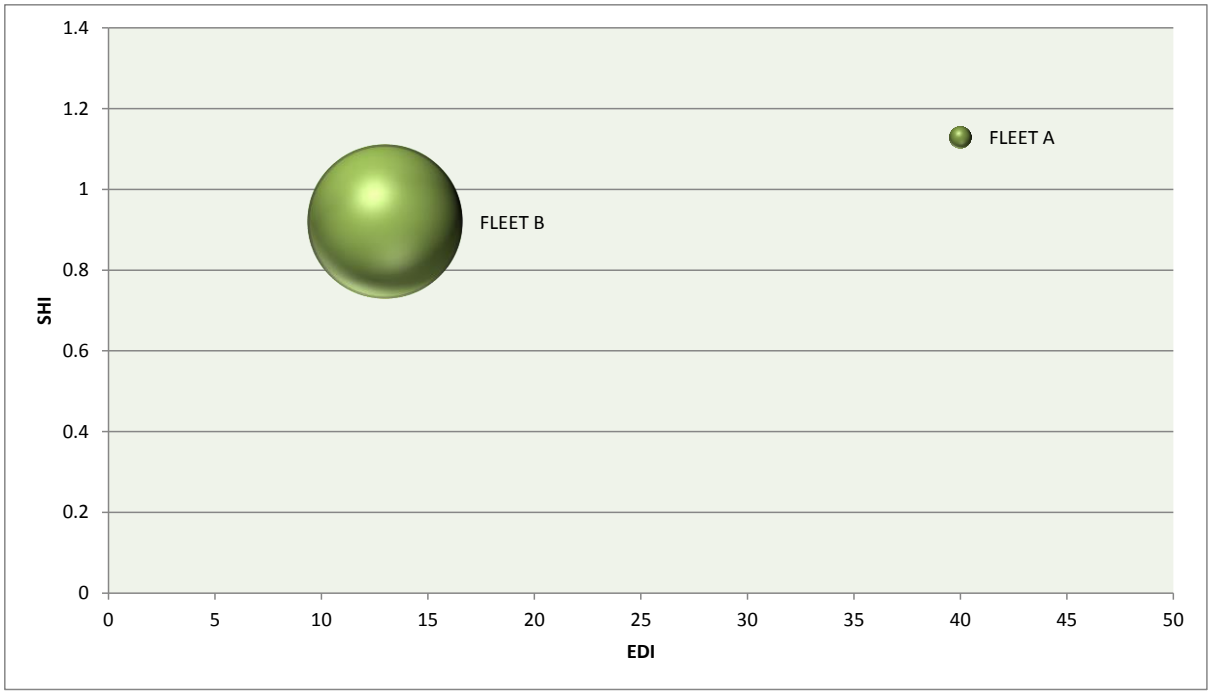

Figure 3.8.1 Relationship between EDI and SHI for two hypothetical fleet segments indicated in Table 3.8.2. Size of the bubble represents the relative magnitude of the landings by each fleet segment.

From Figure 3.8.1, the SHI values indicate that on average Fleet A is more heavily dependent for its revenue on stocks that are being fished at rates greater than F_{MSY} than is Fleet B. The EDI identifies what proportion of the overall revenue to each fleet segment is accounted for by stocks that are fished at rates greater than F_{MSY}. Furthermore Figure 3.8.1 also shows the relative magnitude of the landings by each fleet. Presenting the SHI and EDI values in such a way is likely to help Member States to identify which fleet segments to include in their action plans and give an indication of the extent of any action that may be required to redress any imbalance between capacity and fishing opportunities.

Table 3.8.1 – Summary of information shown in Figure 3.8.1

	Fleet A	**Fleet B**
SHI	Highest > 1	Lowest < 1
EDI	Highest	Lowest
Landings	Lowest	Highest

Hence for stocks that are overfished with respect to F_{MSY}, Fleet A has the greatest economic dependency, but accounts for the smallest proportion of the landings from such stocks. An action plan may therefore be targeted more to Fleet B than to Fleet A because even though Fleet B's reliance on overfished stock is less than Fleet A and has a lower economic dependence on such stocks, it is responsible for exerting a much higher level of fishing mortality than Fleet A.

Examining the values for the EDI and SHI in combination with the indicator for number of overharvested stocks (NOS) may be informative in this respect. Table 3.8.2 shows the values for SHI, EDI and NOS for two hypothetical fleets A and B.

Table 3.8.2 - Indicator values for SHI, EDI and NOS for two hypothetical Fleets A and B from a single Member State. In practice such a table would include columns for all of the fleet segments for a single Member State.

Indicator	Fleet A	Fleet B
SHI	1.13	0.92
EDI	40%	13%
NOS	LP[1]	3

[1] *On reflection the Expert Group considers that the proposal of presenting the NOS indicator in the STECF report 15-02 should be amended slightly. Only fleet segments which do not fish any overharvested stocks should have a NOS value of 0. Fleet segments which fish overharvested stocks, but fall below the N% threshold should have a NOS value of 'LP' (Low Proportion) to clearly indicate that although the fleet segment is fishing overharvested stocks, catch levels of the stocks in question are low.*

The values in Table 3.8.2 imply the following:

SHI

Using the criteria in the 2014 guidelines, because the SHI value is greater than 1, Fleet A is, on average, relying for its income on fishing opportunities which are structurally set above levels corresponding to exploitation at levels corresponding to MSY.

Using the criteria in the 2014 guidelines, because the SHI value is less than 1, Fleet B is not, on average, relying for its income on fishing opportunities which are structurally set above levels corresponding to exploitation at levels corresponding to MSY.

The SHI values alone would perhaps imply that in this example, an action plan involving Fleet A only may be appropriate as Fleet B appears not to require any action as it is not overly reliant for its revenue from stocks that are exploited above F_{MSY}. However, the SHI gives no information on how much catch or fishing mortality is generated by Fleets A and B. Such information is required in order to inform on the potential impact of any action plan involving either fleet. If Fleet A is responsible for only a small proportion of the overall catches of the stocks at risk, then an action plan involving that fleet alone will have only a small impact.

EDI

The EDI gives a measure of the extent that the fleet is reliant on landings from stocks that are being exploited at rates that exceed F_{MSY}. In this example, it is clear that Fleet A is highly reliant on stocks that are exploited above F_{MSY} (40% of its revenue is accounted for by such stocks), while the reliance of Fleet B on such stocks is only 13%. Such information allows managers to consider the potential economic consequences of an action plan involving either fleet.

NOS

As currently calculated (see STECF 15-02 report) the NOS indicator combines information on both the number of overfished stocks exploited by a fleet segment and the relative magnitude of the value of the landings from such stocks by all the fleet segments for a single Member State. The resulting value indicates the relative impact that a fleet is having on

stocks that are fished above F_{MSY} compared to the other fleet segments in that Member State. It does not provide any information on the relative impact that the fleet segment is having on overfished stocks compared to fleet segments from other Member States that are exploiting the same stocks; for a potential improvement of the methodology see below. Furthermore, a value of zero does not indicate that a fleet is not exploiting stocks that are fished at rates above F_{MSY}, merely that their contribution to the fishing mortality on such stocks is small compared to other national fleet segments, because landings by that fleet from such stocks are relatively small. For this reason EWG 15-17 considers that the proposal of presenting the NOS indicator in the STECF report 15-02 should be amended slightly. Only fleet segments which do not fish any overharvested stocks should have a NOS value of 0. Fleet segments which fish overharvested stocks, but fall below the N% threshold should have a NOS value of 'LP' (Low Proportion) to clearly indicate that although the fleet segment is fishing overharvested stocks, catch levels of the stocks in question are low. In the above example it is clear that Fleet A is having a relatively low impact on overharvested stocks since the NOS value is 'LP', but that the impact of Fleet B is impacting 3 such stocks.

Combining the Indices

Using all 3 indices gives a better overview of the impact the 2 fleets are having on stocks that are being overharvested and how economically dependent they are on such stocks. Such information is required in developing and assessing the potential impact of an action plan. The SHI alone does not indicate overcapacity (out of balance) of the fleet. To base an action plan on the basis of the SHI could result in inappropriate actions. In the simple example above, Fleet A is indicated to be reliant on overharvested stocks (SHI = 1.13), and has a high economic dependency (EDI = 40%) but compared to other Member State's fleet segments its overall impact on overharvested stocks (NOS = LP) is low. Conversely, Fleet B is indicated not to be economically reliant on overharvested stocks (SHI = 0.92), has relatively low economic dependence on them (EDI = 13%) but overall is having a much higher impact on such stocks (NOS = 3) because it is accounting for a bigger proportion of the overall landings from such stock by all fleet segments within the Member State.

Armed with such information, a management decision can be made with regard to achieving the management objectives for the fishery as a whole through an action plan. Clearly actions involving reductions in Fleet B will have a bigger impact with regard to overharvested stocks than Fleet A and will have less of an impact on the revenue for Fleet B than for Fleet A, even though Fleet A on average is more economically dependent on overharvested stocks. This simple example highlights that the potential trade-offs of alternative actions in attempting to achieve an overall balance between fleets' capacity and their fishing opportunities. It is conceivable that the situation for Fleet A could be improved, provided that an appropriate action plan involving Fleet B can be successfully implemented. An action plan for Fleet B has a much higher impact on the overharvested stocks than an action plan for Fleet A.

Considerations on the Threshold for NOS

The Expert group reviewed the indicator for Number of Overfished Stocks (NOS) proposed in the STECF 15-02 report. In that proposal, the NOS essentially indicates the number of 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) that are exploited by a fleet segment, provided that the catch of such stocks by that fleet segment account for more than N% of the total catches from that stock by all segments in a Member State. N% is an arbitrary threshold aimed to eliminate fleet segments that catch low levels of the stocks in

question. N is expressed as 1 / Number of fleet segments, e.g. if the number of fleet segments is 100, the Threshold percentage would be 1%. If the number of fleet segments is 10, then the threshold would be 10%.

On reflection the Expert Group considers that the above method to estimate the threshold may give rise to values that are misleading and that an alternative method needs to be devised in order to derive a meaningful indicator. An alternative proposal would be to use a threshold taking into account the importance each fleet segment has for the exploitation of an overharvested stock. Such a threshold may be based either on the value or the weight of the landings a certain fleet segment has from an overharvested stock. The EWG suggests that a pragmatic threshold would be to include in the calculation of the NOS only those fleet segments that contribute to the top 80% of landings from an overharvested stock either in weight or value. This would also circumvent the problem that in the old calculation method everything was relative to the fleet segments inside a member state while now the overall impact relative to all fleets fishing on a stock can be taken into account. However, such an approach may mean that fleets from some Member States that catch only a small proportion of overharvested stocks may not be identified as requiring an action plan and this may be seen to be discriminatory. The 80% threshold could also be applied to the fleet landings for a single Member State to help to identify which fleets within the Member State may require an action plan.

3.9 Short and Long Term Considerations for Biological Indicators

EWG 15-17 considers that the present procedures and guidelines to assess the balance between fishing capacity and fishing opportunities are not entirely fit for purpose. There are a number of major issues that need to be addressed in order that Member States can undertake adequate assessments of balance and devise appropriate action plans.

Firstly, there is a need to consider both short and long-term options for the management of fishing capacity. For example, an objective of the CFP is to ensure that the exploitation of living marine biological resources restores and maintains populations of harvested species above levels that can produce the maximum sustainable yield. These exploitation rates should be achieved by 2015 where possible and, on a progressive, incremental basis at the latest by 2020 for all stocks. In Area 27 total allowable catches (TACs), or 'fishing opportunities', are set for most commercial fish stocks in order to achieve the desired exploitation rates. Nevertheless, many stocks in the NE Atlantic are currently exploited at rates greater than F_{MSY} and for these, the short-term catches set in line with the provisions of some management plans can be based on exploitation rates that exceed F_{MSY}. Similarly fishing opportunities set through negotiation in the Fisheries Council may also equate to fishing mortality rates that exceed F_{MSY}. Consequently, F/F_{MSY} based indicators will indicate that some fleet segments are out of balance with their available fishing opportunities. This in turn could lead to the development of inappropriate action plans[21].

A further consideration concerns the notion that as long term fishing mortality rates tend towards F_{MSY}, long term stock biomass converges on B_{MSY}. Moreover recovering stocks may offer increased fishing opportunities in the future and, hence potentially may also offer the possibility to accommodate additional vessels in a given fishery. It follows that Member

[21] This is also true when the 3-year criterion (specified in the 2014 Guidelines) is used as a guide.

States that have completed an action plan to reduce fishing capacity through unwarranted decommissioning may not thereafter have sufficient capacity to take full advantage of their future fishing opportunities.

The maximum sustainable yield objective also applies to Mediterranean stocks. However catch limits, or 'fishing opportunities' as such do not exist in Area 37, with the exception of Bluefin tuna. Instead a series of national management plans have been adopted under the Mediterranean Regulation[22]. The Commission and the Member States are currently reviewing whether the objectives of these national management plans are consistent with the MSY objective[23].

EWG 15-17 noted that data used to calculate indicator values lags at least two years behind the year in which Action Plans are generally prepared. Therefore, rather than providing only short term action plans, Member States should be encouraged to articulate longer term plans (to 2020 and beyond) that set out options for fishing capacity and future fishing opportunities expected as stocks are exploited at rates corresponding to $F_{MSY.}$ These plans should also take into account the impact of other policy instruments that affect the balance between capacity and opportunity, for example the introduction of the landing obligation, the implementation of national management plans in the Mediterranean, or the potential changes resulting form a new technical measures regulation. Such an approach is clearly better suited to understanding and acting appropriately to address short-term as well as long-term structural overcapacity. In some cases this will mean avoiding unwarranted decommissioning and introducing appropriate short term measures where justified. In other cases it will encourage Member States to introduce additional measures, sufficient to address future structural imbalance and to do so at an appropriate time-scale.

3.10 Future Considerations: Proposed Economic Indicators

The Expert Group offers the following observations for consideration by the EC when planning to revise the list of economic/capacity indicators and the respective guidelines for the MS reports on balance/capacity. NOTE: some of the following have previously been discussed by the STECF (see STECF 14-09).

Indicators

MS are required to provide information on two economic indicators: ROI or RoFTA (or Net Profit margin depending on what is available or appropriate) and CR/BER. Both indicators are essentially a measurement of the employment of capital in the fishery, ROI or RoFTA (or Net profit) are long term indicators while CR/BER is a short term indicator. Long term in this case means the inclusion of opportunity costs of capital. If a company earns enough to cover the opportunity costs of capital this would give the company a long-term perspective especially when it occurs over many years.

[22] Council Regulation (EC) No 1967/2006 of 21 December 2006 concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea

[23] COM (2014) 388 final. COM (2014) 545 final. Communication from the Commission to the European Parliament and the Council. Concerning a consultation on Fishing Opportunities for 2015 under the Common Fisheries Policy.

So far the list of indicators does not include ones that cover the other two factors of production, labour and the natural resource. As there is currently no appropriate indicator for resource as a production factor, only an additional indicator for the production factor labour is here considered (Net profit margin has previously been proposed as a proxy indicator for resource productivity).

Labour

EWG 15-17 discussed the inclusion of a labour productivity indicator for the balance/capacity report. In previous reports, GVA/FTE has been proposed. EWG 15-17 once again discussed whether NVA/FTE would be a better choice.

GVA = Income from landings + other income – energy costs – repair costs – other variable costs – non variable costs

NVA = Income from landings + other income – energy costs – repair costs – other variable costs – non variable costs **- depreciation**

These definitions differ regarding the inclusion of depreciation, which follows from the applied capital value for a fleet segment. We are aware that the standard income approach to measuring labour productivity in most industries relies on ratios based on GVA and to follow this would offer some inter-industry comparison with fisheries.

EWG 15-17 discussed the pros and cons of including a labour indicator and what definition and reference points should be applied. However, time was too limited to come to a final conclusion and, therefore, it would be very important to follow up on this discussion during a special EWG in the future.

Capital

The indicator used, Return on Investment on fixed tangible assets, RoFTA, is an appropriate indicator of capital productivity. As mentioned above, RoFTA provides information on the long term. Therefore, it is appropriate to maintain CR/BER as a short-term indicator.

The following definition for the indicators shall be applied:

RoFTA

Net profit / (fleet depreciated replacement value);

where,

Net profit = (Income from landings + other income) - (crew wage + unpaid labour + energy + repair + other variable costs + non variable costs + annual depreciation)

CR/BER

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

where,

CR = income from landings + other income

where,

BER = non variable costs + annual depreciation / (1-[variable costs / current revenue])

and,

Variable costs = crew wage + unpaid labour + energy costs + repair costs + other variable costs

Suggestion for a Dedicated EWG

In the past the EC requested STECF to provide a possible list of indicators to assess balance/capacity of fleets (SGECA/SGRST 08-01). Since then the list of indicators evolved (some were part of the proposed indicators, others like the SHI were not) and guidelines developed how to calculate and present the indicators at fleet segment level. The list of indicators and guidelines may be revised again in the near future (although not immediately). As there is now some experience with the actual indicators, discussions on the appropriateness of different indicators have taken place, and it is clearer whether the indicators are fit for purpose, the EC should consider a new dedicated EWG meeting to formally assess the utility of the existing indicators, test new proposed indicators and revise the existing balance indicator guidelines.

3.11 Assessing Balance in Small Scale Fishing Segments

EWG 15-17 discussed the relevance of RoFTA and vessel use indicators (percentage of inactive vessels, and VUR-220) to assess the sustainability of small scale fishing segments. Economic and technical indicators of small scale fishing segments are directly affected by the low level of activities, low average landings per vessel (exploitation of available fish stocks in very low quantities), and generally low levels of vessel replacement values.

At EU level, the highest levels of vessel inactivity are encountered in small scale fleets, i.e. vessels measuring less than 12 m in overall length. 93% of the inactive vessels were under 12m in length, while vessels between 12 and 24 m accounted for 6% and vessels over 24 m less than 2% of the inactive fleet (AER EWG-15-03 & 15-07). In addition, the vessel use indicator is below 0.7 for over 95% of the fishing segments under 12 m fleet - this is supposed to indicate technical inefficiency (see Figures 3.11.1 and 3.11.2 below). Such low levels of activity may be due to the fact that a large number of small-scale vessel owners operate on a part-time basis and use fishing as an additional source of food and/or income, as a complimentary activity to other economic activities (such as agriculture, tourism etc.), or simply for recreational purposes. All of these potential reasons will result in low levels of fishing activity for many small scale vessels.

The 2014 Balance Indicator Guidelines state that a default value of 220 days at sea should be used if no data on the maximum observed days at sea is available. EWG 15-17 considers that the use of 220 days at sea to assess small scale fishing fleets is not suitable (see also the STECF 15-02 report), and thus suggests that the VUR-220 should not be applied to vessel which measure less than 12 m in length. Where Member States do not provide data on maximum observed days at sea in a fleet segment composed of vessels under 12 m in length, no conclusion on vessel use should be reached. In addition, the calculation of the indicators RoFTA for small-scale fleet segments needs to be considered with care, due to the low level of capital assets values.

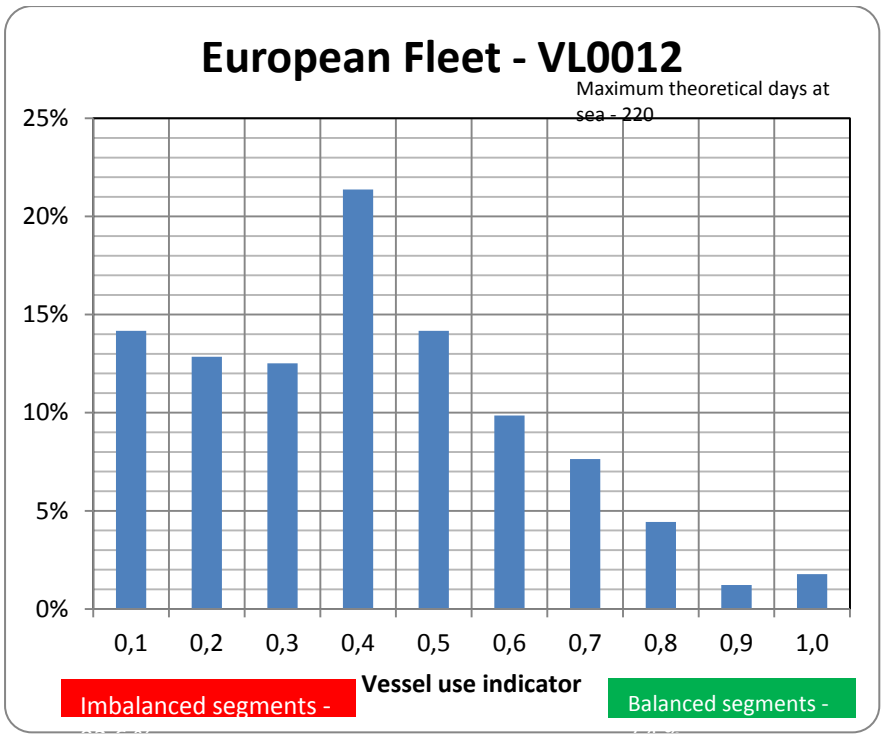

Figure 3.11.1 - Summary of vessel utilisation indicator 'VUR 220' (i.e. calculated with a default value of 220 days at sea) values for vessel measuring less than 12 m in length in European fishing fleets.

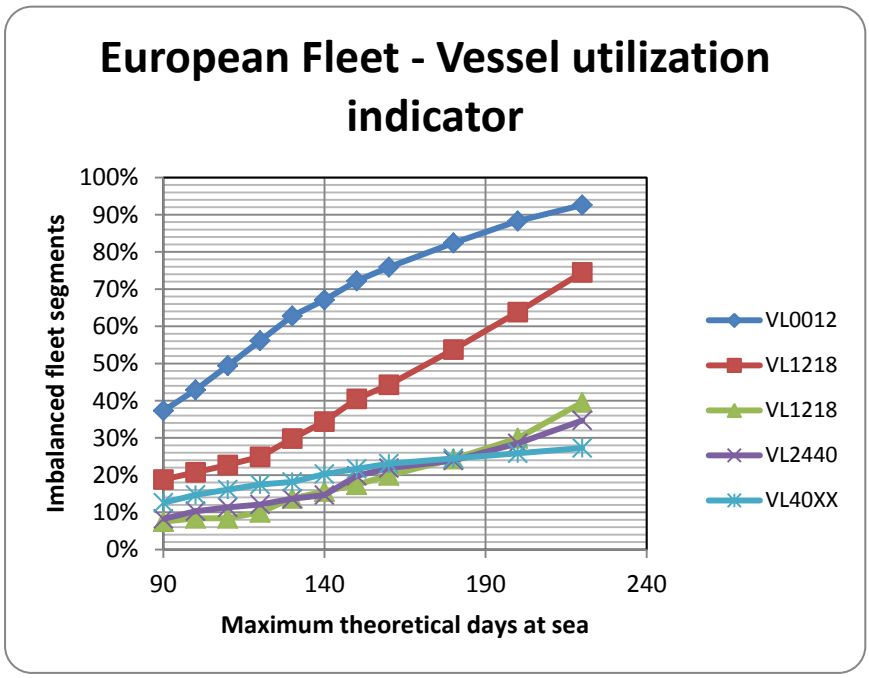

Figure 3.11.2 - Percentage of imblanced fleet segments for the vessel utilisation indicator 'VUR 220' (i.e. calculated with a default value of 220 days at sea) for different DCF vessel length segments.

3.12 Fleet Segment Clustering and Segmentation Caveats

3.12.1 Clustering Caveats

According to the Member State DCF Annual Report guidelines (version of Feb 2015, derived from the *SGECA 09-02* report) Member States should distinguish between segments considered for clustering as follows:

1. Important segments with distinct characteristics;
2. Segments similar to other segments;
3. Non-important segments with distinct characteristics.

Importance of fleet segments should be assessed in terms of landings (value and volume) and/or effort. Similarity should be demonstrated using expert knowledge on fishing patterns or on available data on landings and/or effort.

For each of the cases described, MS should apply the following approaches for clustering according to the different characteristics of fleet segments:

1. Important segments with distinct characteristics
Such segments should not be clustered unless strictly necessary in data reporting for confidentiality reasons. Data should be separately collected for these segments and included in national totals (unless separate identification is then made possible as a consequence).

2. Segments similar to other segments
Such segments can be clustered for sampling purposes, as well as for confidentiality reasons. The segments merged should be selected according to criteria that should be fully explained and justified by the MS. In particular, the approach to determine similarity should be clearly described by the MS.

3. Non-important segments with distinct characteristics
Such segments can be clustered for sampling purposes, as well as for confidentiality reasons. These segments can be merged with other non-important segments. Clustering of these segments with other important segments should be avoided. MS should explain how the lower importance had been determined and for which reasons the clustered segments have been selected. Standard Table III.B.2 should report the segments that have been clustered. Clusters should be named after the biggest segment in terms of number of vessels or economic significance.

Following this advice segments which are clustered should either have similar characteristics or would be of minor importance. In the latter case economic figures of a cluster can be expected to be dominated by the most important individual segment.

In order to look at the possibility to use biological indicators at the same level of clustering as economic indicators as proposed in the STECF 15-02 report, the SHI was also calculated for clustered fleet segments for EWG 15-17. An example contrasting the un-clustered, detailed SHI calculation (fleet defined by country + supra region + fishing technique + vessel length) with clustered SHI calculation (same fleet aggregation as that used for economic indicators) was presented to EWG 15-17:

Detailled version of the SHI

year	area	fleet_code	Economic fleet segment	Catches	stock_assessed	shi
2012	27	FRA-AREA27-TM-VL1824	FRA AREA27 TM VL1824°	26907817	*hke-nrtn her-47d3 *Bss-47 bft alb-27 ple-eche mac-nea *hke-soth *cod-7e-k *ple-echw *hom-west *sol-bisc whm-27 sol-echw whg-7e-k	1,56
2012	27	FRA-AREA27-TM-VL2440	FRA AREA27 TM VL1824°	1142802	ple-eche mac-nea her-47d3 *cod-347d *sol-eche *Bss-47	0,71

Clustered version of SHI

year	area	fleet_code	Economic fleet segment	Catches	stock_assessed	shi
year	area		fleet_code	captures_tot	stock_assessed	shi
2012	AREA27		FRA AREA27 TM VL1824°	28050619	*cod-347d mac-nea *had-7b-k sol-echw ple-eche whg-7e-k bft *cod-7e-k her-47d3 *ple-echw *hke-nrtn *sol-	1,51

Experts noted that with this particular example the clustered SHI calculation hides that fact that two fleets with different SHI values (one with a good SHI (i.e. SHI < 1) / one with a poor SHI (i.e. SHI > 1)) are being merged. Since the clustered calculation results a poor SHI it hides the fact that part of the fleet actually has a good SHI. EWG 15-17 thus concluded that clustering cannot be generally recommended for biological indicators. Instead where biological indicators are available at fleet segment level, it is more advisable to also analyse them at this level without clustering, despite the fact that the necessity of clustering for economic variables/indicators cannot be overcome.

However, several MS when submitting DCF data provide transversal data (including landings) by clustered segments. Hence, any differences between fleet segments within a cluster cannot be detected. EWG 15-17 notes that ccording to the DCF, transversal data should be provided at the fleet segment level.

3.12.2 Segmentation Caveats

It has to be born in mind that DCF fleet segments may include vessels that operate in different fisheries, i.e. not all vessels in a particular fleet segment may perform comparable activities. Fleet segments may not necessarily represent the "management unit" that is desirable when it comes to stocks and their exploitation. Instead, segmentation of fleets according to the DCF is based upon vessel length thresholds and dominant gear used. This has been chosen as a pragmatic approach because it covers all vessels. The current DCF segmentation is therefore not necessarily stock-related.

For this reason, the calculation and interpretation of balance indicators using the current DCF segmentation may not necessarily facilitate the integration between economic, biologic and technical indicators.

Several options may be considered to address this issue, for example:

- If a segment represents several fisheries but consists purely of vessels which individually perform only one particular type of fishery, then the segment can be split into separate units which represent a certain fishery. In this case these subgroups could be directly summed up to the DCF fleet segment.

- If a certain fishery is performed by vessels which individually perform only this one fishery, but belong to different fleet segments, the vessels could be re-arranged to different groups. However, as these vessels belong to different DCF segments, the totals by DCF segment can no longer be determined by simply adding the new subgroups.
- If vessels perform fisheries on different stocks and thus cannot be assigned to only one fleet segment, it might be possible to create a vessel group which represents a certain combination of fisheries/metiers.

Using a different approach than the DCF could possibly allow for a closer link between a vessel group and a certain fishery. The raw data is available in the MS, and even if it is feasible to re-arrange and process them to generate alternative vessel groups, this cannot be achieved in the short-term. It is also possible that vessels may not be fully covered and time series data as currently developed under the DCF would be lost.

Some MS have already raised this issue and proposed more appropriate segmentation in their fleet report. This often consists in subdividing the current DCF segments per area (e.g. France, Italy). In the Guidelines it is noted by the Commission that a MS may provide data in the fleet report according to a segmentation that is different to the DCF if they provide a 'proper justification'. It is unclear what the definition of 'proper' is, and what is expected from MS when a distinct segmentation is proposed. It is a reality for some MS that their national fisheries management is carried out with a different segmentation than that of the DCF segments. In some cases these national segmentations will have been used for a much longer period of time in national fisheries management than the current lifespan of the DCF segmentation. While it is recognised that for the purpose of analysing all EU MS fishing fleets the DCF segmentation serves an important purpose, it is also recognised that the DCF segmentation is not adequate for national fisheries management for all MS.

4 TOR 2 EVALUATION OF MEMBER STATE ACTION PLANS

4.1 Introductory Remarks for TOR 2

Article 22 of Regulation 1380/2013 (on the Common Fisheries Policy) states that where fleet segment assessments *clearly demonstrate*[24] that fishing capacity is not effectively balanced with fishing opportunities, a Member State should prepare and include in its report an action plan for the fleet segment(s) identified as having structural overcapacity. According to Article 22 of Regulation 1380/2013, action plans should set out the adjustment targets and tools to achieve a balance, and a clear timeframe for its implementation. This Regulation is further supported by COM (2014) 545 Final which states that action plans should also specify the causes of imbalance and in particular if it has a biological, economic or technical background as calculated according to the indicators.

[24] COM (2014) 545 Final states that "For the fleet segments with clearly demonstrated imbalance, the Member State concerned shall prepare and include in the report on the balance between fishing capacity and fishing opportunities an action plan…."

The evaluation of action plans conducted by EWG 15-17 was based on the protocol described in the STECF 15-02 report. The protocol and associated criteria were re-evaluated to ensure that they were still appropriate for the 2015 Terms of Reference. The criteria developed and used were based on COM (2014) 545 Final and were as follows:

(i) Consistency between fleet report and action plan – to ensure that the fleet segments identified by the Member State as imbalance in the national fleet report were included in the associated action plan (an explanation was sought in the fleet report if a fleet segment was deemed to be imbalance in the report and then not included in the action plan);
(ii) Presence of a discussion about the cause of imbalance – the reasons as to why a fleet segment is considered to be imbalance should be included in the action plan as stipulated in COM (2014) 545 Final.
(iii) Examination of the adjustment targets – action plans should contain adjustment targets as stipulated in COM (2014) 545 Final.
(iv) Specification of tools to reach the adjustment targets – action plans should contain specified tools as stipulated in COM (2014) 545 Final.
(v) Specification of a clear time frame – action plans should present a clear timeframe for implementation as stipulated in COM (2014) 545 Final.

STECF EWG 15-17 therefore undertook its action plan evaluations against the 2014 Balance Indicator Guidelines (COM (2014) 545 Final). Expert judgements are based on comparing the submitted Member State action plans to the requirements of the 2014 Balance Indicator Guidelines.

ToR2 expressly states that EWG 15-17 is requested to comment on the proposed measures in action plans to eliminate the imbalance identified in national fleet reports. However the indicator values that are used to assess imbalance and contained in Member State reports may well differ from the indicator values considered as part of EWG 15-17 ToR1.

In addition to the action plans submitted by Member States, EWG 15-17 also evaluated the fleet reports of Member States for which no supporting action plan was submitted. EWG 15-17 evaluated these reports to assess whether any fleet segments were identified by the Member State as being imbalance with fishing opportunities which would therefore warrant the need for a supporting action plan according to COM (2014) 545 Final.

4.2 Evaluation of Member State Action Plans

4.2.1 Belgium (BEL)

EWG 15-17 notes that no fleet segments were identified by the Member state as being imbalance and, as such, no action plan was provided.

4.2.2 Bulgaria (BGR)

An action plan based on a combination of biological, economic and technical indicators has been presented by Bulgaria focusing on fleet segments that are considered by the Member State to be imbalance with fishing opportunities. Although there is a general consistency between what is reported in the fleet report and the action plan, EWG 15-17 notes that:

(i) The biological indicators used by the Member State for the identification of imbalance fleet segments are not the ones proposed by the Commission in COM (2014) 545 Final.
(ii) The fleet segmentation used in the action plan refers only to the size of vessels and does not take into consideration the main gear employed.
(iii) The proposed percentage capacity reduction for each fleet segment is not explained.
(iv) Although the fleet segment 0-6m is considered balanced by the Member State, a 1 percent permanent cessation of fishing activities is proposed in the action plan.

Indicators and Fleet Segments Considered
The five indicators reported in the Bulgarian action plan are:
(i) Ratio between average and maximum effort per vessel.
(ii) Festimated/Ftarget ratio.
(iii) Yield/biomass ratio.
(iv) ROI (return on investment).
(v) CR/BER (Current revenue/breakeven revenue).

The fleet segments selected for permanent cessation of fishing activities comprised vessel segments of length classifications between 0 and 6m, 6 and 12m, 12 and 18m, 18 and 24m, using any type of fishing gear. The rationale for the selection of these fleet segments is detailed in the report and is based on the results from the five indicators.

Adjustment Targets and Tools
The adjustment tools and targets proposed by the Bulgarian action plan include the reduction of fishing capacity by a total of 28 vessels in the four fleet segments described above. The percentage reduction in GT or kW is presented and a summary is given in Table 4.2.1 below. The reduction of fishing capacity will be achieved through the scrapping of 20 vessels and the subsequent removal of the fishing vessels from the fleet register. In addition 8 vessels will be retrofitted for activities other than commercial fishing[25].

Table 4.2.1 - Percentage of reduction by fleet segment.

Fleet segment	N. vessels	% reduction
0 – 6 m	7	1
6 – 12 m	16	1
12 – 18 m	6	10
18 – 24 m	3	15

Timeframes for Implementation
The timeframe for implementation of the Bulgarian action plan is clearly stated: "*actions to achieve balance between fishing capacity and fishing opportunities should be concluded by 31 December 2020 and the effect of the plan with regard to the measure concerning the permanent cessation of fishing activities will be limited to 31 December 2017*". The action plan is proposed to start at the beginning of 2016 and the Member State forecasts that 40 percent of the structural overcapacity adjustment plan will be achieved by the end of the first year (by 31 December 2016) and 60 percent in the second year (by 31 December 2017).

[25] The English translation of the Bulgarian action plan states (p. 10): '*The reduction of the fishing capacity by a total of 28 vessels will be achieved through the removal from the fishing vessels register and subsequent scrapping of 20 vessels and the retrofitting of 8 vessels for activities other than commercial fishing.'*

Conclusion on Assessment of Proposed Measures

EWG 15-17 notes that the Bulgarian authorities have presented an action plan that clearly identifies fleet segments that the Member State considers to be imbalance, along with adjustment targets, tools and timescales targeting these fleet segments. Noting COM (2014) 545 Final, EWG 15-17 is unable to consider the appropriateness of a capacity reduction scheme as the action plan does not describe the reasons for this and the associated fleet reduction targets. EWG 15-17 notes that the biological indicators used in the action plan do not reflect those contained in the guidelines communicated to Member States (COM (2014) 545 Final).

4.2.3 Croatia (HRV)

The Croatian action plan identifies three fleet segments that the Member State considers to be in imbalance with their fishing opportunities, and also provides details of proposed adjustment targets and tools. EWG 15-17 notes that the use of monitoring throughout the length of the action plan would assist the Member State in measuring progress towards the set targets.

Indicators and Fleet Segments Considered

Croatia clearly and consistently identified three fleet segments (PS, DTS and DFN) in the fleet report and action plan that are considered to be imbalance by the Member State. A brief rationale for this selection was included in the action plan. The Member State raises numerous reservations regarding the appropriateness of indicators in general (e.g. SHI) but also in specific fleets (e.g. DFN). Croatia reported results for the following indicators: (i) the Inactive Fleet Indicator; (ii) the Vessel Utilization Indicator; (iii) the Sustainable Harvest Indicator; (iv) the Return of fixed tangible assets (RoFTA); and (v) the Current Revenue / Break-Even Revenue (CR/BER).

Adjustment Targets and Tools

The Croatian action plan included a description of the proposed management tools. These were capacity reduction (for PS), effort reduction (for PS, DTS and DFN) and technical measures (for PS, DTS and DFN). Adjustment targets were also presented. EWG 15-17 notes that some of the values in Table 14 of the action plan may need to be reviewed (e.g. DTS VL06-12 reduction values do not add up to the total reduction planned), which may have also an effect on Table 15. EWG 15-17 was unable to give an informed opinion on the Member State's choice of adjustment targets or the potential impact of the tools chosen to achieve them, since the rationale behind such choices was not explained in the national fleet report.

Timeframes for Implementation

The Croatian action plan provided a timeframe with respect to the EFF (2017) and EMFF (2020). EWG 15-17 notes that the incorporation of monitoring milestones into the action plan would facilitate the Member State in monitoring progress towards adjustment targets.

Conclusion on Assessment of Proposed Measures

EWG 15-17 notes that Croatia has provided an explicit action plan. The Member State's choice of which fleet segments should be included in the action plan was described with sufficient detail. The plan included both adjustment targets and tools proposed by the Member State. EWG 15-17 cannot comment on the reasoning behind the level of adjustment targets and tools since no explanation was provided by the Member State.

4.2.4 Cyprus (CYP)

An action plan was presented by Cyprus for the country's small scale inshore fishery (license categories A&B), which the Member State considers to be imbalance with fishing opportunities. The targeted capacity reduction is expected to be achieved by 2020, with one proposed tool for achieving it, namely permanent cessation of fishing activities, through the withdrawal of fishing vessels from the fleet.

Indicators and Fleet Segments Considered

The Cypriot action plan contains a clear analysis by the Member State into the results of the balance indicators. According to the Member State, the indicators show that vessels with polyvalent passive gears 0-12 m (targeting the small scale inshore fishery with category licenses A&B) appear to be underutilized to some extent, suggesting a technical overcapacity according to Cypriot authorities. The Member State indicates that the SHI values suggest that this fleet segment relies on stocks that are being exploited at rates exceeding those capable of delivering MSY. It is stated that the stocks contributing to the indicator equate to almost 30% of the value of landings, including the most important species for the segment (*Boops boops*). According to the Member State, the RoFTA value for the fleet segment 6-12 m is negative but with a positive trend, indicating economic over-capitalization, however the RoFTA value for the fleet segment 0-6 m is low. It is stated that the ratio CR/BER for the fleet segment 6-12 m is positive but lower than 1, showing that the income is not enough to cover the costs, while the ratio CR/BER for 0-6 m suggests that the segment is profitable according to the Member State. However, EWG 15-17 notes that the Cypriot authorities consider that the results of the CR/BER calculation should be treated with caution, since the data used in the calculations are based on a questionnaire survey due to the absence of financial accounts and logbooks. The Member State therefore concludes that: "*the available scientific information indicates that the vessels with polyvalent passive gears 0-<12m (small scale inshore fishery with category licenses A&B) is in imbalance*" and proposes an action plan.

Adjustment Targets and Tools

The adjustment targets and tools are clearly specified. The management measure of permanent cessation started during the previous programme period (2007-2013). During 2013, 107 small scale inshore vessels (categories A&B) were scrapped with public aid in the context of the Fishing Effort Adjustment Plan of Cyprus Small Scale Inshore Vessels, resulting in a capacity reduction of 299 GT and 3689 kW. The aim of the Member State is to complete this measure under the new programme, with the withdrawal of an additional 55 vessels. In total, once the proposed permanent cessation has been completed, a reduction of at least 30 percent of the small scale inshore fleet is expected.

In Annex II of the action plan, the Member State gives a detailed explanation of the rationale behind the percentage of vessels targeted for scrapping. The targets and tools proposed by Cyprus are the withdrawal of an additional 55 small scale inshore vessels. Moreover, the action plan refers to the fact that a modification of the Cypriot national fisheries law is ongoing, in order to provide the required legal framework for achieving a balance between fishing capacity and fishing opportunities.

Timeframes for Implementation

EWG 15-17 notes the following clearly detailed timeframes for implementation proposed in the Cypriot action plan:

(i) By the end of 2017 completion of the measure of permanent cessation of fishing activities, with the withdraw of 55 small scale inshore vessels;
(ii) Annual evaluation of fishing capacity of the small scale inshore fleet based on the common guidelines;
(iii) Following the completion of the proposed cessation of 55 vessels, and based on the annual evaluations, possible consideration of further management measures for achieving balance of the fleet by 2020.

Conclusion on Assessment of Proposed Measures
STECF EWG 15-17 notes that the segments identified in the action plan correspond to those identified by the MS in its national fleet report as being imbalance. The MS rationale for selecting such fleets is also explained in the action plan. EWG 15-17 notes that the action plan contains arguments in support of the chosen targets and tools.. The timeframe for the delivery of tools is clearly presented.

4.2.5 Denmark (DNK)
EWG 15-17 notes that in Annex 7 of the fleet report, the Danish authorities propose an action plan in cases of imbalance; however the actions proposed do not target any specific fleet segments. In Table F7 of the report, the Member State presents an overview for each DCF fleet segment with a traffic light warning system, however no conclusions are drawn with regards to the balance or imbalance of fleet segments.

Indicators and Fleet Segments Considered
EWG 15-17 notes that there is no analysis of the results of the indicators in the Member State's action plan and no segments are described by the Member State as imbalance and therefore requiring the actions proposed in Annex 7.

Adjustment Targets and Tools
EWG 15-17 notes that in line with COM (2014) 545 Final, an action plan should comprise clearly defined adjustment targets and tools. The action plan states that: "*The Individual Transferable Quotas-management system has contributed to a reduction in capacity and ensures that the fishing activity is automatically adjusted according to the fishing possibilities*."

Timeframes for Implementation
EWG 15-17 notes that the timeframe for implementation of the Danish action plan is not clearly specified. The start date of the action plan is not fixed and the Member State does not set any clear deadline for completion.

Conclusion on Assessment of Proposed Measures
EWG 15-17 notes that the actions proposed in the Danish action plan are not specific to any particular DCF fleet segments. The targets are not clearly specified and the timeframe for proposed actions is not clearly described.

4.2.6 Estonia (EST)

EWG 15-17 notes that no fleet segments were identified by the Member state as being imbalance and, as such, no action plan was provided.

4.2.7 Finland (FIN)

EWG 15-17 notes that no fleet segments were identified by the Member state as being imbalance and, as such, no action plan was provided.

4.2.8 France (FRA)

EWG 15-17 notes that French authorities consider eight fleet segments to be in a state of "*enduring imbalance*" and therefore requiring an action plan. French authorities define "*enduring imbalance*" as: "*Segments with over 15 % of the total landings of one or more depleted stocks in 2011, 2012 and 2013, and segments economically dependent, more than 50 %, on depleted stocks in 2011, 2012 and 2013*."

EWG 15-17 understands that French fleet segmentation has been refined to incorporate lower level geographic fishing zones. This led to the identification of 220 fleet segments in total in the French fishing fleet. Of these 220, fleet segments have been identified as being imbalance by French authorities according to the following criteria: if biological indicators (SHI, NOS or SAR) yield "*negative*" values for a three year period (2011 – 2013) and if more than 50% of the landed value of the fleet segment comes from depleted stocks.

EWG 15-17 notes that French authorities communicate a rationale as to why imbalance is primarily determined by biological indicators suggesting that "*only these indicators identify the segments with a definite impact, in terms of volume landed, on depleted stocks*" and that negative values over a three-year period were required to indicate a "*lasting trend*". EWG 15-17 notes that those fleet segments with negative values for two or less years have been identified as target segments for monitoring.

Indicators and Fleet Segments Considered

EWG 15-17 notes there to be consistency between the French fleet report and supporting action plan. French fleet segments considered by the Member State to be imbalance (in line with the above criteria) were as follows: (i) Bay of Biscay - Netters (DFN) - VL1012; (ii) Bay of Biscay - Netters (DFN) - VL1218; (iii) Bay of Biscay - Netters (DFN) - VL1824; (iv) Eastern Channel - Netters (DFN) - VL1012; (v) Mediterranean - Seiner (PS) - VL1824; (vi) Mediterranean - Netters (DFN) - VL0006; (vii) Mediterranean - Netters (DFN) - VL0612; and (viii) Mediterranean - Various towed gear (MGO) - VL0612. In the latter three fleet segments only vessels using gangui methods have an "*enduring imbalance*".

Adjustment Targets and Tools

EWG 15-17 notes that the French authorities present a rationale for the adjustment targets proposed (in this case, capacity reduction targets). The rationale is based on methods used to quantitatively estimate the extent of imbalance observed. This estimate was then used to estimate the reduction of landings required to bring the fleet segment into balance, which was subsequently used to inform the capacity reductions required by the fleet segment in question. The action plan identifies those fleet segments that the Member State has assessed as having "*enduring imbalance*". EWG 15-17 notes that adjustment targets and tools proposed are tailored to each fleet segment and include a range of measures, such as: the permanent cessation of activities; temporary cessation of activities; greater selectivity for fishing gear; limited fleet renewals and entries for imbalanced segments; and consideration of management measures proposed in multi-annual plans.

Timeframes for Implementation

The action plan sets out a timescale stretching to the end of 2020, with significant reductions in imbalance expected to be achieved by the end of 2017; however it is acknowledged that this timeline is dependent upon the EMFF Operational Programme (OP). EWG 15-17 notes that implementation of the actions within the proposed timeline are dependent on OP EMFF funding and it would be useful to see the planned deadlines for all proposed actions for each fleet segment clearly set out (for example, it is not clear when the ban on new vessels entering the relevant sole fisheries will be enacted). Furthermore, a number of the deadlines described refer to decision-making deadlines (for instance, when meetings will be held), but this does not necessarily reflect the deadline for implementation.

EWG 15-17 notes that the French authorities are considerate of the ever-changing nature of fishing opportunities and therefore propose to review the action plan as appropriate. EWG 15-17 notes that it would be useful to see deadlines for the proposed monitoring of fleet segments incorporated into the action plan.

Conclusion on Assessment of Proposed Measures

EWG 15-17 notes the action plan to be explicit in content and consistent with the fleet report. Timelines are presented along with adjustment targets that are supported with a clear rationale for their calculation. However, timelines presented are often more reflective of decision milestones rather than implementation. Tools for each fleet segment identified as having "*enduring imbalance*" are presented. There is a strong focus on cessation of activities through decommissioning, although EWG 15-17 notes that several other alternatives are provided.

4.2.9 Germany (DEU)

The German action plan identifies six segments which the Member State considers to show signs of potential imbalance with fishing opportunities:
(i) passive gear fleet segments - PG VL10-12 (static net vessels) and DFN VL12-18 (drift or fixed netters);
(ii) demersal trawl fleet segments - DTS VL10-12, DTS VL12-18, DTS VL18-24, DTS VL24-40.

In the fleet report, the Member State described fleet segments carrying out small-scale coastal fishing activities as having indicator values at or near threshold levels (from economical, biological and technical indicators as stipulated in COM (2014) 545 Final). For various reasons (such as, low fishing capacity of the vessels in this segment, low catches as percentage of the overall figure), German authorities see no reason at the present time for the development and implementation of an action plan for these segments. German authorities do however state that they will regularly monitor the situation and, if necessary, take action over the coming years. Moreover, the TBB VL10-12 (beam trawlers) segment is not included in Annex 5 of the German annual fleet report, which contains values for the SHI. The Member State reports that no analytical stock calculation was performed due to a fact that there is no quota for the common shrimp which is the target species for this segment.
The action plan presented by Germany includes detailed information about the biological, economic and technical results of the indicators for fleet segments. In Table 3 of the German action plan all indicator results of the Member State are presented. However, the assessments for two of the segments (DTS VL18-24 and DTS VL24-40) are based only on biological indicators.

Indicators and Fleet Segments Considered

For fleet segments identified as showing signs of potential imbalance by German authorities, the results of all indicators (biological, economic and technical) for each fleet segment are included (see Table 3). The Member State recognises that PG VL00-10 could be considered to be imbalance, but this is excluded from the action plan, although a clear rationale is presented for this.

Adjustment Targets and Tools

The Member State presents the following global targets:
(i) Transposition of legal requirements of new Common Fisheries Policy to promote a positive investment;
(ii) Adjustments to indicators used in order to improve the accuracy of measures to adjust fishing capacity to fishing opportunities;
(iii) Modernisation of the German fishing fleet;
(iv) Actively shift fishing pressure in order to maintain small-scale fisheries in the Baltic Sea.
The adjustment tools presented by Germany are:
(i) Measures to shift relevant quotas;
(ii) MSC certification;
(iii) Marketing support;
(iv) Aid restrictions;
(v) Modernisation;
(vi) Fisheries monitoring and control;
(vii) Cod camera project in the North Sea.

EWG 15-17 notes that progress towards such global targets is difficult to monitor and evaluate. Furthermore, EWG 15-17 observes that there is no tailoring of targets to the individual fleet segments even though differing causes of potential imbalance are identified by the Member State. EWG 15-17 notes that the inclusion of quantitative adjustment targets will make it easier to assess the implementation of the proposed tools.

Timeframes for Implementation

A clear timeframe for implementation of the proposed measures is described in the action plan. The Member State presents a plan to evaluate the implementation of the proposed measures in 2017 and, if applicable, implement further measures in 2018.

Conclusion on Assessment of Proposed Measures

The German action plan is based on a full assessment of indicators as included in the fleet report. EWG 15-17 notes that the proposed plan includes a range of global adjustment targets and tools, along with a timescale for implementation and monitoring. EWG 15-17 notes that it would be helpful if quantitative targets were used in order to assess the Member State's progress towards adjustment targets over time.

4.2.10 Greece (GRC)

The fleet report from Greek authorities does not draw any conclusions with regards to the balance or imbalance of national fleet segments and no action plan is provided. However, EWG 15-17 notes that the report identifies pressures on some stocks according to biological indicators, including *Merluccius merluccius* and *Parapenaeus longirostris* in the Aegean, described as being at the "*point of complete exploitation*". In relation to these stocks, the fleet

report concludes that "*these species are the main target species of trawlers and, therefore, fishing efforts should be further reduced on the basis of a preventive approach*", however no supporting fleet segment balance analysis or action plan is provided by the Member State. Similarly for hake, Greek authorities conclude that "*we must reduce the pressure exercised on the stock, mainly by trawlers, through the permanent withdrawal of vessels or the temporary discontinuation of activities*", however no supporting fleet balance analysis or action plan is provided by the Member State.

4.2.11 Ireland (IRL)

The Irish action plan focuses on the medium sized demersal trawler and seiner segments (DTS 12-18 and DTS 18-24), and includes several measures to redress the economic imbalance identified by the Member State. The fleet report describes different effort reduction schemes that have already been put in place: a kW/day scheme, a seasonal closure, highly selective gear and, lastly, two decommissioning schemes in 2005-2006 and 2008. In addition to this the action plan proposes price enhancement measures, on board value added measures and targeted decommissioning.

The largest segment in the Irish fleet (with over 1800 vessels) is the polyvalent segment, which includes DCF segments DFN, DTS, FPO, HOK and PMP of different lengths. These segments fish in different areas including the Celtic Sea, West of Scotland and Irish Sea, and target demersal and pelagic species in varying proportions. The Member State considers that several of these segments have characteristics that influence the indicator values. Irish authorities also highlight certain methodological issues that may influence the characterisation of a fleet segment as imbalance.

<u>Indicators and Fleet Segments Considered</u>
In the fleet report, the Member State states that based on economic performance "*some degree of fleet adjustment is necessary for the Irish polyvalent (12-24 m LOA) fleet*". The closest equivalent by DCF fleet segmentation are the fleet segments DTS 12-18 m and DTS 18-24 m. In the MS action plan Ireland further concludes that "*the possibility of overcapitalisation within the polyvalent 24-40 m length class also exists*.

Technical indicators are not used by the Member State to assess fleet segments because, as explained in the fleet report, the Member State considers that they do not give "*an accurate picture*" due to differences in fleet aspects and natural conditions in the polyvalent fleet.

With regards to biological indicators Ireland states that "*the rather coarse aggregation of fleet segments fails to consider both spatial and stock specific differences of different sub-fleets or metiers that make up the fleet segment can result in situations where the overall perception is being driven by a small a sub-component making it difficult to identify metier specific issues. As a consequence, indicators can only be considered to be indicative of imbalance and prevents any definitive conclusions from being drawn*." Ireland nevertheless presents SHI indicators, and notes that "*for the DTS fleet segments the SHI indicators are persistently >1 and recent analysis using the 2014 assessment data shows that this problem continues with all segments*".

Economic indicators are then used to identify those fleet segments for which an action plan is required: "*However it should be noted that when the economic indicators are considered the primary segments of concern are the DTS 12-18 and the DTS 18-24m segments*". The

economic indicators presented in the action plan are the CR/BER and the RoFTA. For segment DTS 12-18 m the action plan states that the short and long term indicators in the last two years of the analysis were passed but that the DTS 12-18 m length class length class was very close to failing the long term indicator in 2013. The fact that the DTS 12-18m length class failed the net profit indicator in the AER report is also highlighted. For segment DTS 18-24m the action plan states that the fleet segment shows "*signs of overcapitalisation*", and that the closest equivalent Irish vessel length category of polyvalent 18 - 24 m length class *"has a stable negative trend throughout the time series*". For segment DTS 24-40 m the action plan states that (as was the case for the DTS 12-18m segment) the DTS 24-40m segment passed the short and long term indicators in the last two years of the analysis but also that the equivalent Irish "*polyvalent 24-40 m length class fails both indicators in half of the years throughout".*

The Irish action plan then discusses the implications of the introduction of the Landing Obligation (LO). With regards to the Irish polyvalent fleet segments the MS concludes that "*Given that the Irish polyvalent 18-24 vessel length is already failing the economic indicators it is expected that this length class will further decline in its economic performance in the years to come. Additionally, the polyvalent general 24-40 length class, while passing the economic indicators in 2013, has shown high variability since 2008. The introduction of the LO is expected to impact this length class significantly*".

Given the facts that (i) the DCF DTS 12-18 m segment passed the short and long term indicators in the last two years of the analysis, (ii) the Irish polyvalent 12-18m segment overall has more positive economic indicator results than the polyvalent 18-24 m and 24-40 m segments (Figures 2a and 2b in the action plan) , and (iii) the MS highlights the impacts of the Landing Obligation on the Irish polyvalent 18-24m and 24-40m segments, EWG 15-17 notes that it is not clear why the action plan states that "some degree of fleet adjustment is necessary for the Irish polyvalent (12 – 24 m LOA) fleet", but the polyvalent 24-20m length class is not considered in the action plan.

The action plan focusses on the Irish polyvalent fleet. However the analysis of economic indicators in the MS fleet report also shows poor economic performance in other Irish fleet segments, e.g. for the RoFTA the MS concludes "*The DRB (dredge) segments begin badly in 2008 but recover by 2011 before failing in 2012*" and "*The TM segment (pelagic) fail this indicator in all years except 2012 for length classes 1218 and 40XX".* Similarly for the CR/BER: "*DRB segment overall looks instable, 2011 being the only year where all length classes passed this indicator*", and "*The pelagic segment classes of 2440 and 40XX fail this short term indicator in all years except for 2012*". EWG 15-17 notes that although some explanations for the poor economic performance of certain fleet segments are given in the fleet report (e.g. for the pelagic fleet see p. 27), the criteria based on which the polyvalent fleet were chosen for the action plan are not discussed in detail.

Adjustment Targets and Tools

EWG 15-17 notes that according to the fleet report, the actions proposed by the Member State should contribute significantly to achieving balance between capacity and fishing opportunities. According to the report, this is further supported by a specific performance assessment from 2012 on previous use of decommissioning (the Value for Money study). The characteristics of the decommissioning scheme, including budget and access conditions are detailed in the action plan.

The action plan quantifies the impact of the proposed price enhancement and on board value added schemes to account for a 20-30 percent reduction of the economic imbalance of the fleets segments. For the impact of the decommissioning schemes, basic calculations have been performed to predict the impact of the exit of the least profitable vessels on the total economic balance of the segment. Measures to make sure that it is those vessels that leave the fisheries are detailed in the Value for Money report.

Timeframes for Implementation

According to Irish authorities, the action plan will take place in 2016 and 2017. The support schemes are scheduled to conclude on 31 December 2017 coinciding with the end of the EMFF programme.

Conclusion on Assessment of Proposed Measures

EWG 15-17 notes that based on economic performance the Irish action plan considers that "*some degree of fleet adjustment is necessary for the Irish polyvalent (12 – 24 m LOA) fleet*". The closest equivalent by DCF fleet segmentation are the fleet segments DTS 12-18 m and DTS 18-24 m. In the MS action plan Ireland further concludes that '*the possibility of overcapitalisation within the polyvalent 24-40 m length class also exists*".

EWG 15-17 notes that in the fleet report Ireland outlines reasons why in the opinion of the MS technical indicators give an inaccurate picture, and biological indicators are only indicative of imbalance, and should not be used to draw definite conclusions on imbalance.

EWG 15-17 further notes that the rationale behind the choice of fleet segments included in the action plan based on economic indicators is not clearly described. In particular EWG 15-17 considers that it is not clear why the action plan states that "s*ome degree of fleet adjustment is necessary for the Irish polyvalent (12 – 24 m LOA) fleet*", but the polyvalent 24-20m length class is not considered in the action plan.

4.2.12 Italy (ITA)

An action plan based on technical and biological criteria has been presented by Italy to identify fleet segments that are assessed by the Member State to be imbalance with their fishing opportunities. Information on 12,451 vessels, totalling 163,842 GT and 1,007,768 kW is presented. These are categorised by fishing method, length category, geographical sub-area, and species group. Of these, 15 fleets are identified by Italian authorities as imbalanced covering:

(i) 7 fishing methods: (DTS - Demersal trawlers/seiners, TM - Pelagic trawlers, PS - Purse seiners, DRB - Dredgers, PGP - polyvalent passive gears only, PMP - active and passive gears, and HOK - hooks),
(ii) 5 length categories: (LOA <12 total, 12<=LOA<18 total, 18<=LOA<24 total, 24<=LOA<40 total, LOA>=40 total),
(iii) 6 Geographical Sub-Areas - GSA: (09 North Tyrrhenian Sea, 10 South Tyrrhenian Sea, 11 Sardinia, 16 Strait of Sicily, 17 Northern Adriatic Sea, 18 Southern Adriatic Sea, 19 Ionian Sea), and,
(iv) 2 species groups (demersal, small pelagic).

EWG 15-17 notes the following in relation to the Member State's action plan:

(i) The criterion used by the Member State to assess whether fleet segments are in balance with their fishing opportunities include the Sustainable Harvest Indicator (SHI), Number of Overexploited Stocks (NOS), Economic Dependency Indicator (EDI), Return on Fixed Tangible Assets (RoFTA), Current revenue over break-even revenue (CR/BER); Inactive Vessel Indicator and Vessel utilization ratio (UTR).
(ii) The Member State proposes a 7 percent reduction in the capacity (GT/kW) of the trawler fleets targeting demersal stocks, and a 10 percent reduction in the capacity (GT/kW) of the purse-seine/pair-trawling fleet in GSAs 17/18.
(iii) While no specific timeframe is identified in the action plan, the Member State's fleet report does note that the percentage reduction described may be achieved by the end of 2017 on the basis of financial resources allocated in the Operational Programme.
(iv) The action plan states that along with capacity reduction in specific fleets, there should also be measures to improve the exploitation pattern and to reduce the adverse impacts of towed gear on the benthic habitat.

Indicators and Fleet Segments Considered

Biological sustainability indicators considered are i) SHI (Sustainable Harvest Indicator), ii) NOS (Number of Overexploited Stocks), and iii) EDI (Economic Dependency Indicator). These are presented by fishing method, length category, GSA, and species group for years 2012 - 2014. Owing to the lack of biomass based reference points the SAR indicator was not calculated by Italian authorities. The Number of Overexploited Stocks indicator was used by the Member State to identify fleet segments in overcapacity: specifically, those that had a value of 2. For these, the SHI was also estimated to provide a qualitative indication of the level of overcapacity according to the Member State. EWG 15-17 notes that the application of these criteria was consistent in the majority of cases, but there are instances where fishing method/GSA/length category combinations that appear to meet the criteria used by the Member State for inclusion in the fleet reduction plan are omitted from the action plan. The NOS indicator for the fleet segment demersal trawlers, 24-40m, GSA 18 in 2014 was 2 (see Table B8 in Annex B of the Italian fleet report), thus based on the assessment years indicated in the fleet report for GSA 18 (2012-2014) and the assessment criteria used by the MS, this fleet segment should have been included in the action plan. No rationale for the exclusion of this fleet segment is provided by the MS. Overall Italy identified 16 imbalanced fleets all within the demersal and small pelagic species groups.

Economic sustainability indicators presented are i) RoFTA (Return on Fixed Tangible Assets) and ii) CR/BER (Current revenue over break-even revenue). These are presented by fishing method, length category, and GSA. According to the Member State's report, the trawling segment has negative values in all the GSAs and for almost all length classes. EWG 15-17 notes that apart from trawlers, many other gear types showed ROFTA values of <0. Although EWG 15-17 recognises that COM (2014) 545 Final states that '*fleet segments with poor economic performance which are fishing healthy stocks may face low profitability related to other factors … which are not necessarily related to an imbalance between capacity and available resources'*, EWG 15-17 considers that it would be useful for the Member State to provide a more detailed rationale as to why these additional segments are not included in the Member State's action plan.

Technical sustainability indicators presented are i) Inactive Vessel Indicator and ii) UTR (Vessel utilization ratio). These are presented by fishing method, length category, and GSA.

Adjustment Targets and Tools

The action plan specifies both the number of vessels to be scrapped, along with the total capacity (GT) and cost, by fleet. However, noting COM (2014) 545 Final, EWG 15-17 notes that it cannot assess the appropriateness of the proposed 7 percent reduction in capacity (GT/kW) of the trawler fleets targeting demersal stocks and the 10 percent reduction in the capacity (GT/kW) of the purse-seine/pair-trawling fleet in GSAs 17/18 since no explanation for these targets has been provided.

The action plan notes that along with capacity reduction in specific fleets, there should also be measures to improve the exploitation pattern and to reduce the adverse impacts of towed gear on the benthic habitat. The Member State proposes that these should be achieved by selective permanent or seasonal closure of areas.

Timeframes for Implementation

While no specific timeframe is identified in the action plan, the Member State's fleet report does note that the percentage reduction identified may be achieved by the end of 2017 on the basis of financial resources allocated in the Operational Programme.

Conclusion on Assessment of Proposed Measures

In the action plan, the Member State aims to rebalance the capacity and productivity of the main fish stocks by reducing current fishing mortality (Fc) by an average of at least 20 percent. This is to be done by the proposed implementation of a capacity reduction plan targeting a further 7 percent reduction in the capacity (GT/kW) of the trawler fleets targeting demersal stocks and a 10 percent reduction in capacity (GT/kW) of the purse-seine/pair-trawling fleet (in GSA 17 & 18). These capacity reductions are proposed in addition to reductions achieved under schemes financed through the European Fisheries Fund that are due to be completed in 2015.

The targets listed in the action plan are clearly set out by fleet segment (fishing methods, length categories, Geographical Sub-Areas and, species groups). Targets are provided as percentage reduction in capacity with accompanying information on the precise quantity by GT, vessel number, and cost. Noting COM (2014) 545 Final, EWG 15-17 notes that it would be useful to better understand the reasons why a capacity reduction scheme on the scale envisaged is required for the identified fleet segments.

While no specific timeframe is identified in the action plan, the Member State's fleet report does note that the percentage reduction identified may be achieved by the end of 2017 on the basis of financial resources allocated in the Operational Programme.

The Member State also envisages further reductions in fishing mortality Fc (of at least 10%) to be brought about through multi-annual management plans provided for by Regulation (EU) No 1380/2013 (Articles 9 and 10) and/or through changes in the management plans in force (under Regulation (EC) No 1967/2006). Italian authorities consider that this will be achieved through a combination of temporary cessation, effort control, and a ban on towed gear in biological protection areas.

4.2.13 Latvia (LVA)

Latvia presents an action plan for netters (DFN 24-40). According to the Member State, this fleet operates in the Baltic Sea and targets cod stocks. The action plan proposes decommissioning for the entire fleet.

Indicators and Fleet Segments Considered

One segment, DFN 24-40, has been identified in the Latvian report for an action plan. However, the Latvian report does not contain general conclusions stating which fleet segments are balanced and which are imbalanced. Furthermore, the Member State does not give justification why only one segment (DFN 24-40) has been selected for an action plan and not any other fleet segments. EWG 15-17 notes that the specific cause of imbalance and therefore rationale for fleet segment selection (for inclusion in action plans) is required according to COM (2014) 545 Final.

Adjustment Targets and Tools

The Latvian report identifies one segment operating in Baltic Sea and targeting cod that requires an action plan. The Member State would like to decommission the total fleet (DFN 24-40), arguing this fleet is a very selective one and could not switch to targeting other fish stocks and the fishing conditions are deteriorating.

The Member State presents different economic indicator results, and gives reference to poor results and forecasts. The Member State also presents biological indicators, which are considered to be in balance. However, Latvian authorities report that fishing mortality for the cod assessment is questionable (underestimated). It is stated that a new calculation is not available yet (on the date of the annual report) and the biological indicators would differ with this new calculation.

The tool presented by the Member State is to decommission the entire fleet fishing for cod in the Baltic Sea (four vessels). A rationale is presented for this tool.

Timeframes for Implementation

The timeframe is presented with a completion date in December 2017. However, the Member State does not propose monitoring during this period.

Conclusion on Assessment of Proposed Measures

Latvian authorities present a plan to decommission one segment, DFN 24-40, targeting cod stocks in the Baltic Sea. Adjustment targets and tools are specified, while a detailed timeframe for implementation is lacking.

EWG 15-17 notes that Latvia presents one action plan for one fleet segment without explaining why this segment has been chosen and other segments haven't been chosen. EWG 15-17 notes that further clarification is required by the Member State as to why this decision has been made.

4.2.14 Lithuania (LTU)

Lithuania presented an action plan for 2015 focused on demersal trawlers operating in the Baltic and targeting cod stocks. The action plan is designed to redress the potential imbalance identified as a result of economic indicators, and proposes reducing capacity ceiling limits (by 500 GT) in order to address this.

Indicators and Fleet Segments Considered

The Lithuania fleet report identifies three fleet segments that demonstrate potential signs of imbalance: pelagic trawlers (TM 24-40) operating in the Baltic and targeting European sprat; demersal trawlers (DTS 24-40) operating in the Baltic and targeting cod stocks; and fleet segment VL00-10.

According to the Member State, segment TM 24-40, comprising pelagic trawlers operating in the Baltic and targeting European sprat, shows a borderline value for F/F_{MSY} of 0.908. Despite Lithuanian authorities acknowledging that this segment demonstrates a risk of imbalance, the segment is not addressed or discussed in the supporting action plan. The reason given for this is that "*this LTU fleet segment which carries out mainly sprat fishery is relatively small (only 7 vessels) and its impact is not tangible considering the proportion of Lithuania fleet size (Lithuanian TM VL2440 segment represents around 3 percent of the respective segment of EU Baltic Sea fleet) quota and catches (Lithuanian share in EU quota 5 percent) made by this Lithuania fleet segment*."

According to the fleet report, segment DTS 24-40, demersal trawlers operating in the Baltic and targeting cod stocks, shows economic indicators outside of recommended thresholds. As such, proposed measures for this fleet segment are included in the Lithuanian action plan.

Lithuanian authorities report that segment VL00-10 demonstrates a trend of increasing inactivity marginally exceeding recommended thresholds according to the vessel utilisation indicator. Also, the vessel utilisation ratio for this fleet segment is slightly below the required threshold according to the national report. However the fleet report concludes that "*the vessel utilisation indicator is not applicable because Lithuania does not allocate fishing opportunities under the effort regime*" and "*inactive fleet indicator analysis does not show any significant fleet misbalance*", therefore segment VL00-10 is not included in the action plan.

EWG 15-17 concludes that there is good consistency between the fleet report and the action plan and the cause of potential imbalance in the DTS 24-40 fleet segment is clearly stated; namely high operating costs compared with income resulting in net losses.

Adjustment Targets and Tools

The action plan aims to "*increase the economical efficiency of the fleet within the segment*" and Lithuanian authorities consider that this can be achieved by reducing the capacity ceiling of the fleet segment. As such, the adjustment target proposed is to decrease the capacity ceiling of this Baltic fishing fleet segment by 500 GT.

It is not possible to assess the scale of this proposal as the action plan contains no indication of whether the ceiling is currently being reached and the level of the current ceiling for this particular fleet segment. Furthermore, there is no rationale given for the scale of this decrease and how this has been calculated. If the current capacity of the fleet segment is below the current ceiling, then it is possible that capping the capacity ceiling in this way may act to limit further growth in the future, and therefore prevent the fleet from enduring further economic losses, while not having any direct impact on the current fleet that may be seeing net losses at the present time.

The Member State proposes to achieve this target using an Order of the Minister of Agriculture and by ensuring that there are no further new entrants into this Baltic fleet segment.

Timeframes for Implementation
The suggested timeframe for the introduction of the ceiling capacity limit is the end of 2015. There is no proposed monitoring after this period.

Conclusion on Assessment of Proposed Measures
STECF EWG 15-17 notes that the Lithuanian action plan identifies the demersal trawl segment (VL24-40) operating in the Baltic to be at risk of imbalance and gives a clear explanation for the causes of this. There is good consistency between the fleet report and action plan submitted by the Lithuanian authorities. EWG 15-17 is unable to assess the appropriateness of the proposed adjustment targets as no rationale for the scale of adjustment targets is provided.

4.2.15 Malta (MLT)

An action plan based on the economic ROI indicator has been presented by Maltese authorities for the fleet segment using pots and traps (FPO). EWG 15-17 notes the following:

(i) The only criterion taken into consideration in assessing whether a fleet segment is in balance with fishing opportunities is a single economic indicator, while technical and biological indicators have not been used.
(ii) The action plan is quite brief and more detailed discussion would be required for EWG 15-17 to consider the measures proposed.

Indicators and Fleet Segments Considered
The only indicator considered in the Maltese action plan is the economic ROI indicator estimated for the pots and traps fleet segment (FPO). Although the polyvalent passive gear segment (PGP) is also mentioned at the beginning of the action plan, the measures proposed within the action plan relate only to pots and traps (FPO).

Adjustment Targets and Tools
The Maltese action plan identified capacity freezing for pots and traps segment (FPO) as the primary management tool. However, for all of the fleet segments, an improvement in data quality is proposed by carrying out a census in 2015 (for reference year 2014) instead of sampling for the fleet economic survey.

No specific adjustment targets are defined in the Maltese action plan.

Timeframes for Implementation
The timeframe for implementation of the action plan is not clearly defined. The table reported in Annex 1 shows that the actions are to be introduced immediately, but it does not define a clear timeframe of when these actions will be completed and whether monitoring of these actions is planned.

Conclusion on Assessment of Proposed Measures

EWG 15-17 notes that the Maltese action plan would benefit from clearly defined and quantitative adjustment targets and more detailed timeframes outlining the implementation of the proposed management measures.

4.2.16 Netherlands (NLD)

EWG 15-17 notes that no fleet segments were identified by the Member state as being imbalance and, as such, no action plan was provided.

4.2.17 Poland (PLD)

In its action plan Poland proposes decommissioning for two fleet segments, PG 10-12, fishing with nets and other passive gear, and DFN 12-18, fishing with nets, and temporary cessation (of up to six months) for another two segments DTS 12-18 and 18-24. The report states that all of these segments must be involved in the cod fishery to take part in these actions.

According to the Member State, an overarching issue for the Polish fleets is the lack of an analytical assessment for the Eastern Baltic cod stock for the last two years. This is the most important Baltic fish stock for Poland according to Polish authorities, which hinders the accurateness of the assessment of biological balance or imbalance of the Polish fleets.

Polish authorities also identify another issue that affects the indicators of economic efficiency, namely that the rules attribute a given vessel to only one segment; according to the fleet report "*catches [obtained] with a variety of gears during the year are a specific feature of Polish fishing"*.

Indicators and Fleet Segments Considered

According to the Member State, segments PG 10-12, DFN 12-18, DTS 12-18 and DTS 18-24 show biological imbalance in both the SHI and SAR indicators. For the technical indicator on vessel utilisation, PG 10-12, as for all other segments under twelve metres, the fleet report states that the underutilisation is due to natural conditions (freezing of the lagoon), part time activity and "*own use*". For most of the other segments, Polish authorities argue that the lower utilisation is the result of current emaciation of the Baltic cod. These indicator values and explanations contribute to justify the actions proposed for these segments.

According to the Member State, segments PG 10-12 and DFN 12-18 present ROI and CR/BER indicators that show an economic imbalance. According to the fleet report this is due to lower income and the level of costs (mainly crew costs and fuel costs). These results, added to the biological indicator results referred to above, offer an explanation as to why the Member State has decided to take action on these segments.

With respect to segments DTS 12-18 and DTS 18-24, the national fleet report shows negative values for the longer term economic indicators ROI but positive ones on the shorter term indicator CR/BER. This provides some explanation as to why these fleet segments were also selected for inclusion in the action plan. However, the Member State emphasises that the possible interference of the changes in attribution of vessels to these segments (see below) might have an influence on the economic indicators, which in any case would benefit from monitoring.

According to the Polish report, segments TM 18-24 and 24-40 show an imbalance in the biological indicator SHI but the Member State does not include any actions for these segments in the action plan. The report also states that the SAR indicator does not show any imbalance for these two segments. According to the Member State, pelagic trawlers have stable values close to the threshold for the vessel utilisation indicator. Furthermore, the report states that segment TM 18-24 shows balance in the economic indicators and is on the threshold or over it for the social indicators remuneration per crew, remuneration per FTE and GVA. According to the report, however, segment 24-40, however, shows negative values of the ROI indicators in the line of segments. The Member State indicates that this negative result, as well as the result for DTS 18-24 and the positive economic results of TM 18-24, might be influenced by the increase of sprat demand due to lower catches of cod and the corresponding switch of vessels from one segment to another. EWG 15-17 considers that Member State's decision not to take action on these segments is justified by the explanations provided in the fleet report.

Finally, the fleet report shows that the PG 00-10 sector shows a balanced profile in all indicators, and this is the reason for not including this fleet segment in the Polish action plan.

Adjustment Targets and Tools

Both measures contained in the action plan, permanent and temporary cessation, are aimed at vessels that fish at least two quota species from which one must be Baltic cod. The permanent cessation proposed by the Member State will affect 50 vessels, while the number of vessels affected by the temporary cessation is not included in the action plan. The action plan also proposes complementary actions to temporary cessation, in order to provide alternative activities for those vessels. The Member State reports that for these activities, which aim at restoring biodiversity amongst other things, there will be financial support, which Polish authorities claim could improve the economic balance of the fleet segments.

Timeframes for Implementation

The action plan states that the timeframe for implementation of permanent cessation for segments PG 10-12 and DFN 12-18 will extend until 31 December 2017. In addition, Polish authorities propose that vessels that have not benefited from the support for permanent cessation can obtain support for a six month temporary cessation after 2017. The temporary cessations proposed for DTS 12-18 and DTS 18-24 are limited to a period of six months between 2014 and 2020.

Conclusion on Assessment of Proposed Measures

EWG 15-17 notes that the proposed decommissioning actions for segments PG 10-12 and DFN 12-18 and temporary cessation for the segments DTS 12-18 and DTS 18-24 are consistent with the results of the indicators presented in the fleet report and action plan.
For the segments TM 18-24 and 24-40 for which no action is proposed in the action plan, and given the possible misclassification of vessels suggested in the fleet report, EWG 15-17 notes that close monitoring could assist with the development of corrective actions in the future if required.

4.2.18 Portugal (PRT)

Portugal presents action plans for purse seine (PS) and dredge (DRB) fleet segments, both of which the Member State considers to be out of balance with fishing opportunities. For each fleet segment, a separate action plan is presented containing detailed analysis of past and

current status, but with insufficient information on future actions or timeframes for implementation of measures. Purse seine and dredge fleet segments were identified based on analysis of the "*balance indicators together with complementary information, more specifically with regard to the situation of some more significant fish stocks in the segment*".

Indicators and Fleet Segments Considered

Both action plans (for purse seiners and dredgers) present analysis of capacity and effort, along with balance indicators for Vessel Utilisation and Sustainable Harvest. Although analysis of indicator results may indicate imbalance of fleet segments, these segments have not been clearly identified as imbalanced in the Member State's report. Instead, action plans were drafted based on the relationship between fleet segments and stock status.

Adjustment Targets and Tools

The action plan contains no clearly stated adjustment targets, and both action plans predict possible measures based on future scenarios. For the purse seining segment, the report states that "*should stocks not recover, it could be necessary to adjust fleet capacity through permanent withdrawal measures for some vessels, to be carried out in 2016 and 2017, based on fishing possibilities at the time*." Similarly, the action plan for dredgers states that "*should the level of total ban days continue to increase, it may prove necessary to adjust the fleet by permanently removing some vessels*." Both plans predict future management tools but with no firm commitment to tools and no adjustment targets given.

Timeframes for Implementation

Both action plans, for PS and DRB segments, foresee implementation of proposed measures though 2016 and 2017, but Portuguese authorities state that this will depend on the future stock status for PS, and future bans on DRB segments.

Conclusion on Assessment of Proposed Measures

Although both the Portuguese report and plan contain detailed analysis of fleet segments, EWG 15-17 notes that action plans for the two chosen segments were drafted based on stock status and the possible negative impact of these segments. Since plans were based on complementary information, beside balance indicators, EWG 15-17 notes that it is helpful to provide a detailed explanation for this decision and cannot make further comment without this information. In addition, both action plans are missing clear information on targets and timeframes.

In summary, EWG 15-17 notes that the Portuguese action plan would benefit from a clear statement on the rationale for the chosen fleet segments, and concise adjustment targets and timescales. If no action is to be taken in the short-term, EWG 15-17 notes it important that a monitoring plan is put in place while the Portuguese authorities are assessing whether to introduce management tools and measures.

4.2.19 Romania (ROU)

EWG 15-17 notes that no fleet segments were identified by the Member state as being imbalance and, as such, no action plan was provided.

4.2.20 Slovenia (SVN)

Three actions plans have been presented by Slovenia: one for purse seiners (PS) and two for drift netters (DFN) – one for less than 6 metres and one for 6-12 metres.

NEWG 15-17 notes that economic, technical and biological indicators for more than half of the Slovenian fleets are not presented in the fleet report. EWG 15-17 is not able to assess the rationale for the exclusion of these fleet segments from the national action plan.

Indicators and Fleet Segments Considered

The Member State identifies four segments that require an action plan: PS 06-12; PS 12-18; DFN 00-06; and DFN 06-12. Biological, technical and economic indicators were calculated for purse seiners, while only technical and economic ones were used for netters. EWG 15-17 notes that these indicators were calculated although the MS considers that: '*the proposed indicators are not suitable for describing Slovenian fisheries sector and above all it is not suitable taking decisions on management measures on their basis'*.

Adjustment Targets and Tools

The Member State proposes three different action plans:

- The action plan for purse seiners focuses on three tools: reducing fishing effort, temporary cessation of fishing activities, and freezing the number of licences.
- Two tools have been identified for inclusion in the action plan for netters 00-06: freezing the number of licences and implementation of relevant measures of CFP (for MSY upon the stock).
- The same two tools have been identified for inclusion in the action plan for netters 06-12: freezing the number of licences and implementation of relevant measures of CFP (for MSY upon the stock).

No specific adjustment targets are defined within Slovenian action plans.

Timeframes for Implementation

The timeframes for implementation are not clearly defined in the report.

Conclusion on Assessment of Proposed Measures

Slovenian authorities propose an action plan for purse seines since these vessels are already the subject of a multiannual management plan in the Adriatic Sea. The Slovenian authorities further conclude that netting segments (DFN) are imbalance according to economic and technical indicators. However, biological indicators have not been calculated for this segment

EWG 15-17 cannot assess the Member State's decision to exclude more than half of Slovenia's fleet segments from action plans as no indicators are presented.

EWG 15-17 notes that the Slovenian action plan would benefit from a clearer rationale why indicators were calculated for certain fleet segments but not for others, the inclusion of clear adjustment targets, as well as timeframes for implementation.

4.2.21 Spain (ESP)

The fleet report highlights several fleet segments for which Spanish authorities consider there are signs of imbalance, these include several gear types in the North Atlantic, and several in the Mediterranean. Fleet segments have been classified according to the fishing grounds that

they work in (North Atlantic national fishing grounds, rest of the North Atlantic, Mediterranean, Canary Islands and other regions).

Due to late transmission of the Member State's final action plan, a full English translation of the plan was not available to EWG 15-17 during the meeting and the proposed actions could not be reviewed.

4.2.22 Sweden (SWR)

Swedish authorities present "*Actions in response to situations of imbalance*" where three segments were described in detail (DFN 12-18, DTS 18-24 and TM 24-40). According to the Member State, the Swedish PMP 10-12 segment also indicates imbalance according to the SHI in 2013, but there were no active vessels in this segment in 2014 so it was excluded from the plan. EWG 15-17 notes that the segmentation used for economic and technical indicators (active and passive) is not comparable with segmentation used for biological indicators (by gear type).

Indicators and Fleet Segments Considered
The three segments considered in the action plan have SHI values above one indicating imbalance according to the Member State. According to Table A1, some other segments have SHI values above one as well (for instance HOK 12-18), but they were not included in the action plan, although no explanation is provided. For the economic indicators, the Member State presents critical values for vessels less than 12m using passive gears, while for Vessel Utilisation indicators, values at threshold level can be observed for vessels using passive gears and for vessels of less than 12m using active gear. However, due to differing methods of segmentation, it is not possible to compare balance indicators at segment level.

Adjustment Targets and Tools
Management measures related to DFN 12-18 and DTS 18-24 segments are presented in the action plan. These refer to actions under multiannual and recovery plans for cod stocks in the Baltic and in the North Sea, Skagerrak and Kattegat (Council Regulation (EC) No 1098/2007 and Council Regulation (EC) No 1342/2008). Proposed actions include reduction of effort and catch restrictions. Management measures proposed for the TM 24-40 segment refer only to catch restrictions. Although measures have been described, there are no clear adjustment targets presented by the Member State.

Timeframes for Implementation
All proposed measures in the action plan are already in place, and there are no additional measures proposed with timeframes for implementation.

Conclusion on Assessment of Proposed Measures
EWG 15-17 notes that it is not possible to compare biological, technical and economic indicators due to different segmentation by the Member State. The action plan would benefit from clearly defined adjustment targets.

4.2.23 United Kingdom (GBR)

In the annual fleet report, the UK has stated that none of the fleet segments, as a result of the combination of indicators, "*can be conclusively defined, as out of balance using the full range of indicators available*". Despite this, the UK observes that the exceedance of

thresholds is a sign of a potential imbalance. In consideration of this, the UK has presented an action plan, containing adjustment targets and tools, for all segments for which there is a signal that they are not in balance.

EWG 15-17 notes that the rationale for concluding that there are signs of imbalance for certain fleet segments is explained in the UK annual fleet report.

The UK presents an action plan in tabular form and includes each segment with indicator values outside of the recommended thresholds and therefore considered to be at risk of imbalance according to the Member State. The plan uses the results of biological and economic indicators as the basis for the assessment. The deadline set by the UK to achieve balance of the fleet is 2020.

EWG 15-17 notes the UK's consideration of the impacts of the landing obligation on the balance of the fleet. With regard to this issue, the UK states that: "*As a result UK fisheries administrations may in the future want to consider the use of permanent and temporary cessation in addition to the existing suite of actions. These measures are not included in the current Fleet Action Plan or Operational Programme, but may be introduced in the future depending on need*".

The overall target set by the UK for achieving balance of the fleet is to adjust the value of indicators that are currently outside of recommended thresholds to bring them inside of recommended thresholds. The tools to achieve the targets in the action plan are clear, as is the timeframe for implementation.

Indicators and Fleet Segments Considered

EWG 15-17 notes UK opinion that the exceedance of thresholds is an early warning of a potential imbalance that requires attention, particularly where the biological indicators are concerned.

STECF EWG 15-17 notes that the presented biological indicators are for 2013, while the economic and technical indicators are for 2014. The UK states that: "*Since 2014 biological indicators are not available at the time of writing, 2013 indicators are included in line with DG MARE's advice to Member States in May 2015*."

All fleet segments that show signs of potential imbalance for three consecutive years, from an economic or biological point of view, are considered in the UK action plan.

Adjustment Targets and Tools

The basic targets set out in the UK action plan for achieving balance of the fleet are to adjust the value of indicators that are currently outside of recommended thresholds to bring them inside of thresholds (SHI, SAR, ROI, CR/BR).

The adjustment tools presented by the UK are:
(i) Continue improving the value of SHI for fleet segments through observance of TAC/Quota limits designed to bring the stocks involved to MSY, including compliance with regional multi-annual management plans and technical measures where appropriate.
(ii) Introduction of the transition stage towards the demersal landings obligation - support increased selectivity measures.

(iii) Improve the state of stocks by observance of TAC limits designed to achieve MSY especially for cod stocks where there are:

- Limits on entry to fleet segment and effort restrictions;
- Incentives of gear selectivity measures, including the mandatory use of highly selective gears in some sea areas, such as the Irish Sea;
- Mandatory conservation related measures (Real Time Closures).

(iv) Ancillary benefits from the Cod Recovery regime measures - e.g. conservation and gear selectivity measures; benefits from CFP reform.
(v) Support measures in the EMFF Operational Program available at preferential match-funding rates, such as assistance for small-scale fleet vessels to meet the requirements of the landing obligation, and on-board safety measures.
(vi) Continuing support for development of marketing initiatives, including new measures within the EMFF such as the establishment of a small-scale fleet Producer Organization.

The adjustment tools are specific to specific fleet segments, in other words, tools are tailored so that their performance should lead to the achievement of targets (thereby altering indicators to within the recommended thresholds) according to the Member State. However, EWG 15-17 notes that the establishment of quantitative measurements would help in assessing the performance of the proposed adjustment tools.

EWG 15-17 notes that the UK has provided the introduction of implementation of the demersal landing obligation, in accordance with CFP, as an adjustment tool.

Timeframes for Implementation

The timeframe for implementation of the UK action plan is clearly specified. Despite the fact that the implementation of some measures started in 2014, the end date for each stage of achieving the tools is set. Also there is a set deadline for completion of the action plan in its entirety (2020).

Conclusion on Assessment of Proposed Measures

EWG 15-17 notes that on the one hand the UK states that none of the fleet segments, according to the combination of indicators, "*can be conclusively defined, as out of balance using the full range of indicators available*". On the other hand, the UK does not exclude the possibility of imbalance in some fleet segments, as a result of the exceedance of indicator thresholds. Therefore the UK has presented an action plan, containing adjustment targets and tools, for all segments for which there is a signal that they are not in balance.

EWG 15-17 notes that the UK has presented as an adjustment tool the "*introduction of transition stage to demersal landing obligation - support increased selectivity measures*". However, EWG 15-17 notes that the establishment of quantitative measurements will help to assess the performance of the proposed adjustment tools. EWG 15-17 notes that a reference to the use of EFF and EMFF funds would also be useful.

4.3 Discussion on Evaluation of Member State Action Plans

EWG 15-17 discussed the integration of the 2013 CFP into Member States' action plans, particularly where the timeframe of action plans overlaps with the implementation of policy targets, for instance in the case of the landing obligation. EWG 15-17 notes that some

Member States have considered this overlap and, as such, included forthcoming policy initiatives (such as the landing obligation) within proposed action plans.

EWG 15-17 notes that there are a number of examples where Member States have concluded that there is no clear demonstration[26] of imbalance, but supporting action plans are still provided. EWG 15-17 reiterates advice from the STECF-15-02 report stating that "*STECF considers that conclusions as to whether the capacity of a particular fleet segment is in, or out of balance with fishing opportunities cannot reliably be supported without ancillary information*".

EWG 15-17 notes that the fleet reports and action plans of most Member States considered biological, economic and technical information separately. However, EWG 15-17 notes that integrating all of these sources of information will better inform Member States on the balance between capacity and fishing opportunities at fleet segment level and will inform their decisions on proposals for action plans. EWG 15-17 notes that currently no guidance is provided to Member States on how such information could be integrated. For instance, if biological and economic information both suggest possible problems in the fishery, this may indicate imbalance. However economic drivers (such as reduced profits) may act to reduce the number of vessels in the fleet. On the other hand, if economic drivers are positive and the fleet is economically profitable, but biological information indicates potential problems, this may lead to new vessels entering a fishery where stocks are at risk.

A diverse range of management measures and tools was presented by Member States in their action plans. A summary of the range of measures is provided in Table 4.2.2 below.

Table 4.2.2 - The range of management tools proposed in Member State action plans

Fleet measures	• Reduction of the fishing capacity • Permanent cessation of activities • Temporary cessation of activities • Limiting fleet renewals and entries • Capacity ceiling • Cessation of fishing activities
Technical measures	• Increasing selectivity of fishing gear • Mandatory use of highly selective gears
Economic measures	• Support for development of marketing initiatives • MSC certification • Assistance for marketing support
Other	• Management measures proposed by multi-annual plans • Assistance for adopting requirements of the landing obligation • Assistance for improvement of on-

[26] COM (2014) 545 Final states that "*For the fleet segments with clearly demonstrated imbalance, the Member State concerned shall prepare and include in the report on the balance between fishing capacity and fishing opportunities an action plan*…."

	board safety measures • Real Time Closures • Measures to shift relevant quotas • Assistance in vessel modernisation • Improvement in fisheries monitoring and control

4.4 Conclusions on Evaluation of Member State Action Plans

STECF EWG 15-17 undertook its action plan evaluations against the 2014 Balance Indicator Guidelines (COM (2014) 545 Final). Expert judgements are based on comparing the submitted Member State action plans to the requirements of the 2014 Balance Indicator Guidelines.

EWG 15-17 notes that there has been an increase in the number of Member State action plans in 2015. In total, 16 Member States have identified fleet segments which they consider to be imbalanced, or showing potential signs of being imbalanced, using biological, economic or technical indicators and/or supplementary information, and therefore requiring action plans according to COM (2014) 545 Final. However, a number of Member State action plans lacked clear adjustment targets, tools or timeframes as required according to COM (2014) 545 Final. A further 5 Member States concluded that no fleet segments clearly demonstrated imbalance and did not submit action plans.

Member States are more likely to be able to monitor and demonstrate progress towards the specified management targets if targets are quantitative rather than qualitative. EWG 15-17 notes that specific monitoring plans have been incorporated by some Member States as a means to observe the Member State's progress towards proposed management targets.

EWG 15-17 notes that several Member States have incorporated actions relating to the objectives of the 2013 CFP, including the landing obligation. The integration of such policy targets into Member States' actions plans demonstrates an integrated and long-term approach to addressing the balance between fishing capacity and opportunities.

EWG 15-17 notes that additional guidelines for the preparation of action plans should be incorporated into future guidelines to Member States for the preparation of their annual fleet reports.

5 CONTACT DETAILS OF STECF MEMBERS AND EWG-15-17 LIST OF PARTICIPANTS

Information on STECF members and invited experts' affiliations is displayed for information only. In some instances the details given below for STECF members may differ from that provided in Commission COMMISSION DECISION of 27 October 2010 on the appointment of members of the STECF (2010/C 292/04) as some members' employment details may have changed or have been subject to organisational changes in their main place of employment. In any case, as outlined in Article 13 of the Commission Decision (2005/629/EU and 2010/74/EU) on STECF, Members of the STECF, invited experts, and JRC experts shall act independently of Member States or stakeholders. 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 invited experts make declarations of

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For more information: http://stecf.jrc.ec.europa.eu/adm-declarations

STECF members:

Name	Address[1]	Tel.	Email
STECF members			
Abella, J. Alvaro (vice-chair)	ARPAT – AREA MARE Agenzia Regionale per la Protezione Ambientale della Toscana Articolazione Funzionale RIBM Risorse Ittiche e Biodiversità Marina Via Marradi 114, 57126 Livorno – Italia	Tel. 0039-0555-3206956	alvarojuan.abella@arpat.toscana.it
Andersen, Jesper Levring (vice-chair)	Department of Food and Resource Economics (IFRO) Section for Environment and Natural Resources University of Copenhagen Rolighedsvej 25 1958 Frederiksberg Denmark	Tel. +45 35 28 68 92	jla@ifro.ku.dk
Bailey, Nicholas	Fisheries Research Services Marine Laboratory, P.O Box 101 375 Victoria Road, Torry Aberdeen AB11 9DB UK	Tel: +44 (0)1224 876544 Direct: +44 (0)1224 295398 Fax: +44 (0)1224 295511	baileyn@marlab.ac.uk n.bailey@marlab.ac.uk
Bertignac, Michel	Laboratoire de Biologie Halieutique IFREMER Centre de Brest BP 70 - 29280 Plouzane, France	Tel : +33 (0)2 98 22 45 25 - fax : +33 (0)2 98 22 46 53	michel.bertignac@ifremer.fr
Cardinale, Massimiliano	Föreningsgatan 45, 330 Lysekil, Sweden	Tel: +46 523 18750	massimiliano.cardinale@slu.se
Curtis, Hazel	Sea Fish Industry Authority 18 Logie Mill Logie Green Road Edinburgh EH7 4HS	Tel: +44 (0)131 558 3331 Fax: +44 (0)131 558 1442	H_Curtis@seafish.co.uk

Name	Address[1]	Tel.	Email
STECF members			
Delaney, Alyne	Innovative Fisheries Management, -an Aalborg University Research Centre, Postboks 104, 9850 Hirtshals, Denmark	Tel.: +45 9940 3694	ad@ifm.aau.dk
Daskalov, Georgi	Laboratory of Marine Ecology, Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences	Tel.: +359 52 646892	gmdaskalov@yahoo.co.uk
Döring, Ralf	Thünen Bundesforschungsinstitut, für Ländliche Räume, Wald und Fischerei, Institut für Seefischerei - AG Fischereiökonomie, Palmaille 9, D-22767 Hamburg, Germany	Tel.: 040 38905-185 Fax.: 040 38905-263	ralf.doering@ti.bund.de
Gascuel, Didier	AGROCAMPUS OUEST 65 Route de Saint Brieuc, bat.4 CS 84215, F-35042 RENNES Cedex France	Tel:+33(0)2.23.48.55.34 Fax: +33(0)2.23.48.55.35	Didier.Gascuel@agrocampus-ouest.fr
Graham, Norman (chair)	Marine Institute, Fisheries Science Services (FSS), Rinville, Oranmore, Co. Galway, Ireland	Tel: + 353(0) 91 87200	norman.graham@marine.ie
Garcia Rodriguez, Mariano	Instituto Español de Oceanografía, Servicios Centrales, Corazón de María 8, 28002, Madrid, Spain		Mariano.Garcia@md.ieo.es
Gustavsson, Tore Karl-Erik	Independent Consultant, Göteborg, Sweden		tore.gustavsson@hotmail.com
Jennings, Simon	CEFAS Lowestoft Laboratory, Pakefield Road, Lowestoft Suffolk, UK NR33 0HT	Tel.: +44 1502562244 Fax: +44 1502513865	simon.jennings@cefas.co.uk
Kenny, Andrew	CEFAS Lowestoft Laboratory, Pakefield Road, Lowestoft Suffolk, UK NR33 0HT	Tel.: +44 1502562244 Fax: +44 1502513865	andrew.kenny@cefas.co.uk

Name	Address[1]	Tel.	Email
STECF members			
Kraak, Sarah	Thünen-Institut für Ostseefischerei, Alter Hafen Süd 2, 18069 Rostock Germany	Tel. +49 3818116113	sarah.kraak@ti.bund.de
Kuikka, Sakari	University of Helsinki, Department of Environmental Sciences, P.O. Box 65 (Viikinkaari 1), FI-00014 University of Helsinki, FINLAND	Tel.: +358 50 3309233 Fax. +358-9-191 58754	skuikka@mappi.helsinki.fi
Martin, Paloma	CSIC Instituto de Ciencias del Mar PasseigMarítim, 37-49 08003 Barcelona Spain	Tel: 34.93.2309500 direct line : 34.93.2309552 Fax: 34.93.2309555	paloma@icm.csic.es
Malvarosa, Loretta	NISEA S.c.a.r.l.		malvarosa@nisea.eu
Murua, Hilario	AZTI - Tecnalia / Unidad de Investigación Marina, Herrera kaia portualdea z/g 20110 Pasaia (Gipuzkoa), Spain	Tel: 0034 667174433 Fax: 94 6572555	hmurua@azti.es
Nord, Jenny	Southeast Asian Fisheries Development Centre SEAFDEC		jenny@seafdec.org
Nowakowski, Piotr	Maritime University of Szczecin. – Faculty of Food Science and Fisheries, Department of Fishing Technique, Szczecin		npfgd@poczta.onet.pl
Prelezzo, Raul	AZTI - Tecnalia / Unidad de Investigación Marina Txatxarramendi Ugartea z/g 48395 Sukarrieta (Bizkaia), Spain	Tel: 94 6029400 Ext: 406- Fax: 94 6870006	rprellezo@suk.azti.es
Sala, Antonello	Fishing Technology Unit National Research Council (CNR) Institute of Marine Sciences (ISMAR) - Fisheries Section Largo Fiera della Pesca, 1 60125 Ancona - Italy	Tel: +39 071 2078841 Fax: +39 071 55313	a.sala@ismar.cnr.it
Scarcella, Giuseppe	Environmental Management Unit National Research Council (CNR) Institute of Marine Sciences (ISMAR) - Fisheries Section Largo Fiera della Pesca, 1	Tel: +39 071 2078846 Fax: +39 071 55313	g.scarcella@ismar.cnr.it

Name	Address[1]	Tel.	Email
STECF members			
	60125 Ancona – Italy		
Somarakis, Stylianos	Department of Biology University of Crete VassilikaVouton P.O. Box 2208 71409 Heraklion Crete Greece	Tel.: +30 2610 394065, +30 6936566764	somarak@biology.uoc.gr
Stransky, Christoph	Thünen Institute [TI-SF] Federal Research Institute for Rural Areas, Forestry and Fisheries, Institute of Sea Fisheries, Palmaille 9, D-22767 Hamburg, Germany	Tel. +49 40 38905-228 Fax: +49 40 38905-263	christoph.stransky@ti.bund.de
Theret, Francois	Scapêche 17 Bd Abbé Le Cam 56100 Lorient France		ftheret@comata.com
Ulrich, Clara	DTU Aqua, National Institute of Aquatic Resources, Technical University of Denmark, Charlottenlund Slot, JægersborgAllé 1, 2920 Charlottenlund, Denmark		cu@aqua.dtu.dk
Vanhee, Willy	ILVO - Institute for Agricultural and Fisheries Research Unit Animal Sciences - Fisheries Ankerstraat 1, B-8400 Oostende, Belgium	Tel 00-32-59-34-22-55 Fax 00-32-59-33-06-29	willy.vanhee@ilvo.vlaanderen.be
van Oostenbrugge, Hans	LandbouwEconomishInstituut- LEI, Fisheries Section, Burg. Patijnlaan 19 P.O.Box 29703 2502 LS The Hague The Netherlands	Tel:+31 (0)70 3358239 Fax: +31 (0)70 3615624	Hans.vanOostenbrugge@wur. Nl

EWG-15-17 participants

STECF members			
Name	Address[1]	Telephone no.	Email
Giuseppe SCARCELLA	Environmental Management Unit National Research Council (CNR) Institute of Marine Sciences (ISMAR) -	+39 071 2078846	g.scarcella@ismar.cnr.it

	Fisheries Section Largo Fiera della Pesca, 1 60125 Ancona - Italy		
Ralf DOERING	Thünen Bundesforschungsinstitut, für Ländliche Räume, Wald und Fischerei, Institut für Seefischerei - AG Fischereiökonomie, Palmaille 9, D-22767 Hamburg, Germany	Tel.: 040 38905-185 Fax.: 040 38905-263	ralf.doering@ti.bund.de

Invited experts			
Name	Address	Telephone no.	Email
Jörg BERKENHAGEN	Thünen Bundesforschungsinstitut, für Ländliche Räume, Wald und Fischerei, Institut für Seefischerei - AG Fischereiökonomie, Palmaille 9, D-22767 Hamburg, Germany		joerg.berkenhagen@ti.bund.de
Cecile BRIGAUDEAU	Des requins et des Hommes BLP Technopole Brest-Iroise 15 rue Dumont d'Urville 29280 Plouzane, France		cecile@desrequinsetdeshommes.org
Francesco COLLOCA	Istituto per l'Ambiente Marino Costiero – Consiglio Nazionale delle Ricerche (IAMC-CNR) UOS Mazara del Vallo Via L. Vaccara 61, Mazara del Vallo, Italy	+390923908966	francesco.colloca@iamc.cnr.it
Richard CURTIN	Bord Iascaigh Mhara (BIM) Crofton Road Dun Laoghaire Co. Dublin Ireland	+353860483421	curtin@bim.ie
Fabienne DAURES	IFREMER - RBE/UEM - Unite d'Economie Maritime Centre de Brest France	+33298224924	Fabienne.Daures@ifremer.fr
Jerome GUITTON	Agrocampus oust 65 rue de saint brieuc 35700RENNESFrance	+33 223 485859	jerome.guitton@agrocampus-ouest.fr
Leyre	Thunen-Institute of Sea	+494039405107	leyre.goti@vti.bund.de

GOTI	Fisheries Palmaille 9, 22767 Hamburg, Germany		
Ane IRIONDO	AZTI Tecnalia Spain	+356 22921255	airiondo@azti.es
Armelle JUNG	Des requins et des Hommes BLP Technopole Brest-Iroise 15 rue Dumont d'Urville 29280 Plouzane, France	+33 614386001	armelle@desrequinsetdeshommes.org
Michael KEATINGE	Bord Iascaigh Mhara (BIM) Crofton Road Dun Laoghaire Co. Dublin Ireland		keatinge@bim.ie
Alexander KEMPF	Thünen Bundesforschungsinstitut, für Ländliche Räume, Wald und Fischerei, Institut für Seefischerei - AG Fischereiökonomie, Palmaille 9, D-22767 Hamburg, Germany		alexander.kempf@ti.bund.de
Leyla KNITTWEIS (chair)	Department of Biology, Faculty of Science University of Malta Msida, MSD 2080, Malta	+356 23402018	leyla.knittweis@um.edu.mt
Christos MARAVELIAS	Marine Biological Resources, HCMR, Agios Kosmas, 16604 Hellinikon, Greece	+302109856703	cmaravel@hcmr.gr
Marin MIHANOVIC	Ministry of Agriculture, Directorate of Fishery, Planinska 2a, Zagreb, Croatia	+38516443192	marin.mihanovic@mps.hr
Sarah PILGRIM-MORRISON	Marine Management Organisation Area 8C, 9 Millbank, London, SW1P 3GE, UK	+442072384895	sarah.pilgrim-morrison@marinemanagement.org.uk
Gheorghe RADU	National Institute for Marine Research 'Grigore Antipa', Bdul. Mamaia Nr. 300, 900581 Constanta, Romania		gpr@alpha.rmri.ro
Philip RODGERS	Erinshore Economics Ltd, Saxilby, Lincolnshire, United Kingdom		phil@erinecon.com

Rosaria SABATELLA	NISEA, Fishery and Aquacolture Research Organization Italy		r.sabatella@nisea.eu
Mihaela VELINOVA	TCI at Ministry of Agriculture and Food, Sofia, Bulgaria	+359887921433	m.velinova@hotmail.com
Maria YANKOVA	Institute of Oceanology - BAS Varna, Bulgaria	+359898328115	maria_y@abv.bg
Tomas ZOLUBAS	Fisheries Service under ministry of Agriculture, Klaipeda, Lithuania		tomas.zolubas@zuv.lt

JRC experts			
Name	Address	Telephone no.	Email
Natacha CARVALHO	Joint Research Centre (IPSC) Maritime Affairs Unit Via E. Fermi, 2749 21027 Ispra (VA), Italy	+390332786713	natacha.carvalho@jrc.ec.europa.eu
John Casey	Joint Research Centre (IPSC) Maritime Affairs Unit Via E. Fermi, 2749 21027 Ispra (VA), Italy	+390332786713	john.casey@jrc.ec.europa.eu

European Commission			
Name	Address	Telephone no.	Email
Giuseppe SPERA	DG Mare 99 Rue Joseph II, 1049 Brussels, Belgium	+3222958791	Giuseppe.Spera@ec.europa.eu
Natacha CARVALHO	Joint Research Centre (IPSC) Maritime Affairs Unit Via E. Fermi, 2749 21027 Ispra (VA), Italy	+390332786713	Stecf-secretariat@jrc.ec.europa.eu

Observers			
Name	Address	Telephone no.	Email
Justine MAILLOT	Greenpeace European Unit, 199 rue Belliard 1040 Brusssels, Belgium	+3222741922 +32479996922	justine.maillot@greenpeace.org

6 List of Electronic Report Annexes

Electronic annexes are published on the meeting's web site on:

http://stecf.jrc.ec.europa.eu/ewg1517

List of electronic annexes documents:

1. EWG-15-17 – Balance Capacity Tables
2. EWG-15-17 - SHI_supplementary data

7 LIST OF BACKGROUND DOCUMENTS

Background documents are published on the meeting's web site on:
http://stecf.jrc.ec.europa.eu/ewg1517

List of background documents:

1. EWG-15-17 – Doc 1 - Declarations of invited and JRC experts (see also section 5 of this report – List of participants)
2. COM(2014) 545 final – Doc 2 - Guidelines for the analysis of the balance between fishing capacity and fishing opportunities according to Art 22 of Regulation (EU) No 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy.

The following STECF reports used as background documents can be found on:
http://stecf.jrc.ec.europa.eu/reports/balance

1. 2015-02_STECF 15-02 - Balance capacity_JRC94933.pdf
2. 2015-02_STECF 15-02 - Balance capacity all tables.xlsx
3. 2014-06_STECF 14-09 - Balance indicators_JRC90403.pdf
4. 2014-06_STECF 14-09 - Balance indicators_all tables_JRC90403.zip
5. 2013-11_STECF 13-28 - Balance capacity_JRC86350.pdf
6. 2013-04_STECF 13-08 - Balance indicators_JRC81659.pdf
7. 2012-11_STECF 12-18 Balance capacity_ JRC76704.pdf
8. 2011-11_STECF11-17- Balance capacity and fishing opportunities_JRC67795.pdf
9. 10-09_SG-BRE 10-01 - Fleet capacity and fishing opportunities _JRC61983.pdf

Report to the STECF Expert Working Group (EWG 15-17)

Preparation of indicators to assess the balance between fleet capacity and fishing opportunities

Report of the Expert Group held in Ispra, Italy from 29-30 June 2015 in preparation for EWG 15-17.

Background

STECF is expected to be requested to provide values for a suite of indicators used for the annual review of Member States' assessment of the balance between fleet capacity and fishing opportunities. To assist the STECF in this process, an Expert group will be convened from 29-30 June 2015 in the JRC, Ispra, Italy with the following terms of reference.

Terms of Reference

1. The Expert Group is requested to review the biological indicator values prepared under *ad hoc* contract and the economic indicators prepared by the JRC based on the 2015 call for economic data for the EU fishing fleet. Based on that review, the Expert Group is requested to provide agreed values for the following indicators in accordance with the methodologies outlined in the 2014 Guidelines to Member States (COM (2014) 545 final) for review by the STECF.

(i) Sustainable harvest indicator (SHI)

(ii) Stocks at risk indicator (SAR)

(iii) Return on investment (ROI) / Return on Fixed Tangible Assets (RoFTA)

(iv) Ratio between current revenues and break-even revenue (CR/BER)

(v) The inactive fleet indicator

(vi) The vessel use indicator

2. In addition, in accordance with the proposals of the STECF 15-02 report, the Expert group is also requested to provide values for the following additional indicators.

(vii) Number of overfished stocks (NOS)

(viii) Economic dependency indicator (EDI)

(ix) To provide separate values for the quantitative and qualitative estimates of the SAR indicator.

3. Review and compare the utility of the additional indicators under point 2 above with the SHI and the SAR (points 1(i) and 1(ii)) and if possible, specify which of those indicators are likely to be most informative in assessing Member States efforts to achieve a balance between fleet capacity and fishing opportunities.

Participants

Invited Experts

Michel Bertignac, Ralf Döring, Jerome Guitton, Armelle Jung, Marin Mihanovic, Carlos, Moura, João Ramos Do Ó, Jarno Virtanen

JRC Experts

Natacha Carvalho**,** John Casey

DG MARE representative

Giuseppe Spera

The EWG met in JRC, Ispra, Italy as planned. J. Casey volunteered to act as Chair and coordinate proceedings. Items 1 and 2 of the terms of reference were fully addressed. Item 3 was not addressed.

Ad hoc contract reports

The Expert group noted that the contractors Armelle Jung and Jerome Guitton had delivered their reports to DG MARE and had fulfilled all obligations under the terms of their contracts. Their reports included preliminary values for all of the indicators requested.

Review of indicators

Methodology

The Experts involved in calculating the indicator values (A. Jung, J. Guillon and N. Carvalho) presented an overview of the methodology used and highlighted a number of issues with such calculations. Major issues were as follows:

1. Allocation of catches to stocks

The methodology used to allocate combined species catches (e.g. anglerfish; *L. piscatorius* and *L. budegassa*) to the appropriate stocks was changed so that the allocation was in line with the reported catches in the ICES advice summary sheets. A separate check to validate that all fleet catches were allocated to the appropriate stocks in the NW Atlantic and Mediterranean was also undertaken. Several errors were noted and corrected.

2. Allocation of landings to Supra-region

The methodology used to allocate landings to each supra-region was found to be incorrect. Reported landings from 2 or more supra-regions for the same fleet segment were all being allocated to the supra-region to which the fleet segment had been allocated. Allocation of landings to fleet segment and supra-regions has now been corrected.

The modified procedures associated with the above were implemented and revised preliminary indicator values were calculated. Final indicator values will be recalculated and provided to EWG 15-17 following the release of advice from ICES and the GFCM later in the year

Comments on individual indicators.

The STECF 15-02 report commented extensively on the utility of the indicators listed in the Terms of reference above. These comments are not repeated here but the Expert Group notes that the following points may be worthy of further consideration and comment by the EWG 15-17.

Vessel use indicator.

The vessel use indicator is a technical indicator that can only provide useful information for homogenous fleet segments and even then it is unlikely to provide a reliable indicator of overcapacity. For heterogeneous fleet segments (e.g. small-scale fleet segments, for which many vessels operate on a part-time basis), this indicator does not provide any useful information as the maximum number of fishing days cannot be defined. Overall it should not be taken as a reliable indicator, especially with regard to potential overcapacity. Annex I illustrates the results of an analysis which shows for example, that the vessel use indicator as it is currently interpreted would imply that over 92% of the EU under 12m fleet is out of balance with fishing opportunities if considered in isolation from other indicators.

Economic indicators

The Expert Group offers the following observations to be taken into account by the EWG 15-17 when evaluating the final indicator values and MS reports on balance/capacity.

- For several countries data is questionable and they are highlighted in red in the data summary (BI-) table (esp. BGR, MLT and CYP). For some countries time series are missing, in part due to a different clustering MS report data under different fleet segments (esp. ESP, FRA).
- The trends in are calculated from the whole time series from 2008 to 2013 (subject to change pending the EWG 15-17 ToRs). For 2014, projections (AER methodology) are provided, which are not included in the trend analysis as2014 data are considered preliminary.
- In the trend analysis it was decided to conclude no significant trend if the changes are within a 10% range. A reduction to a 5% range could be tested to see if it means significant differences.
- For the vessel use indicator values above 1 and below 0.7 are highlighted. A value above 1 normally can't be correct, as you cannot be above the maximum number of days at sea (unless the default maximum was used due to missing data). For a value below 0.7 it is stated in the guidelines that this may be an indication of imbalance (see comments above).
- Net profit margin: The 2014 guidelines state that this indicator should be used if ROI and ROFTA are not available. However, NPM is only available if ROFTA is available.

The expert group also offers the following observations for consideration by the EWG 15-17. NOTE: some of the following have previously been discussed by the STECF (see STECF 14-09).

The economic analysis of fisheries on the input side is related to factors of production. Fisheries employ three production factors: Labour, capital and resource. From the economic perspective the sustainable fisheries indicators should reflect the performance of those factors of production. Current indicators provide only partial information on the balance between fishing capacity and fishing opportunities.

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 also proposes to replace GVA/FTE with Net Value Added per FTE (NVA/FTE) as this indicator is comparable between fisheries.

Capital productivity: The indicator used, Return on Investment on fixed tangible assets, ROFTA, is an appropriate indicator of capital productivity.

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. The only indicator of economic performance is CR/BER, which only reflects the short-term

economic performance of the fleet. However net profits 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.

NP/CR is already available in the AER and could be easily provided from the JRC economic database for the STECF EWG on balance indicators.

Based on the discussion above, a summary of the Expert Group's proposals is given in the Table 1 below.

Note that the proposal is to retain 3 economic indicators only and to replace the current indicators for labour productivity and resource productivity with the proposed alternatives. The NP/CR indicator in particular is a much more informative indicator for resource productivity as it is an indicator for resource rent and a fundamental indicator for economic evaluation of sustainability. It is suggested that the proposals below be included in any future revision of the Guidelines to Member States.

Table 1. Proposed amendments to economic indicators

Production factor	**Indicator**	**Formula**	**Status**	**Comment**
Labour productivity	GVA/FTE	= (Dep + Int + CrC + NP)/FTE	Current To make redundant.	Gross value added includes the capital costs making it non comparable between fleets (small scale vs. large scale).
	Net VA/FTE	= (CrC + NP)/FTE	Proposed new measure for Labour productivity	Net value added per FTE gives a comparable indicator of labour productivity.
Capital productivity	Return on Investment on fixed tangible assets	= NP / Capital asset value	Current	ROFTA gives an appropriate measure of capital productivity.
Resource productivity	CR/BER	= CR/BER	Current To make redundant	CR/BER is only a measure of short term economic performance.
	Net profit margin	= NP/CR	Proposed	Net profit

				represents the resource rent and the net profit margin gives a comparable measure of resource productivity.

Biological indicators

"The group notes that numerous general concerns relating to the SHI and SAR have been discussed in previous Balance/Capacity EWG reports. Nevertheless, it is likely that additional case-specific issues will be identified in the forthcoming EWG 15-17, which will merit further discussion and comment."

Assessing the balance between Capacity and fishing opportunities.

The Expert group offers the following reporting framework for consideration by EWG 15-17 as an aid to assess the balance between capacity and fishing opportunities.

Next steps.

DG MARE has already received preliminary values for all indicators requested. The relevant Experts will provide final values ahead of the EWG-15-17 as soon as the 2015 advice for all stocks becomes available.

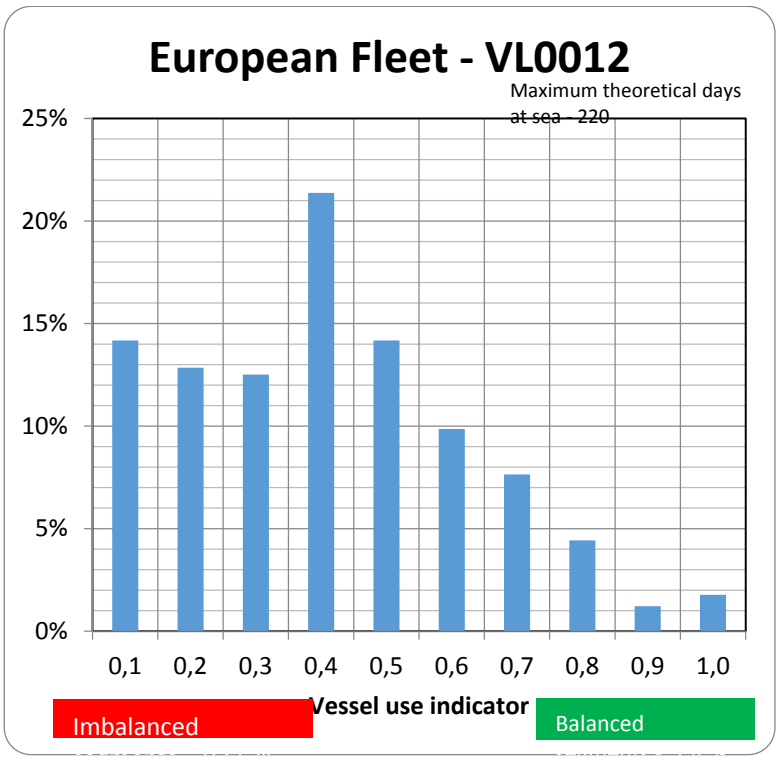
Framework for evaluation of balance between fishing capacity and resources

	Economic indicators			**Indicators by stock**					
				Stock 1		Stock 2			
	Labour productivity	***Capital productivity***	***Resource productivity***	***Biological status of stock 1***		***Biological status of stock 2***			
Fleet segments	***NVA/FTE*** *(thousand €)*	***Return on Fixed Tangible Assets (ROFTA %)***	***Resource rent (net_profit margin %)***	**EDI (%)**	**SDI (%)**	**EDI (%)**	**SDI (%)**	No of Overfished stocks **NOS**	No of Stocks at Risk **NSR**
Segm_1	90	45	35	100	50	0	0	0	0
Segm_2	15	-30	-25	0	0	100	50	1	1
Segm_3	5	0,5	1	33	10	67	40	1	1
Segm_4	25	4	7	89	40	11	10	1	1

Segment 1 represents a positive situation (i.e. balance according to the 2014 Guidelines). Stocks exploited by the segment have good status and the economic indicators are all positive = good economic performance. Segment 2 represents a situation of concern: stock 2 has poor status, segment is heavily reliant on stock 2 and economic indicators are not encouraging. Segments 3 and 4 are mix of the above scenarios. Both exploit stocks whose status is poor. However economically, segment 3 has a high dependency on stock 2 and also has a poor economic performance (close to zero profits): low indicators for all production factors. At the same time segment 4 generates low resource rent and labour and capital productivities are mediocre. Overall segment 4 could be considered of less concern than segment 3.

Note of course these are snapshot assessments i.e. what the situation was 2+ years ag

Annex I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20%
15%
10%
5%
0%
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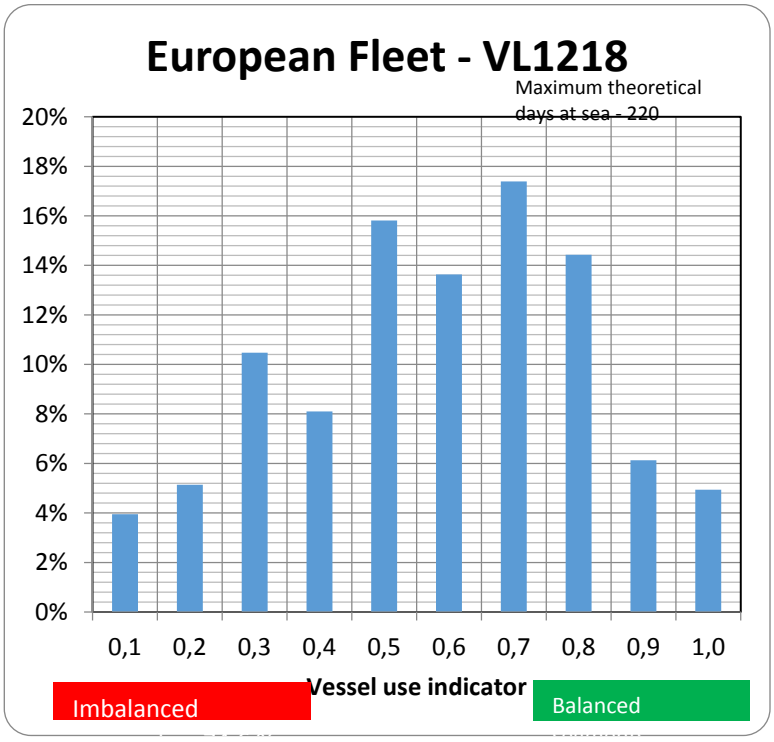
Vessel use indicator
Imbalanced
Balanced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Maximum theoretical days at sea - 220
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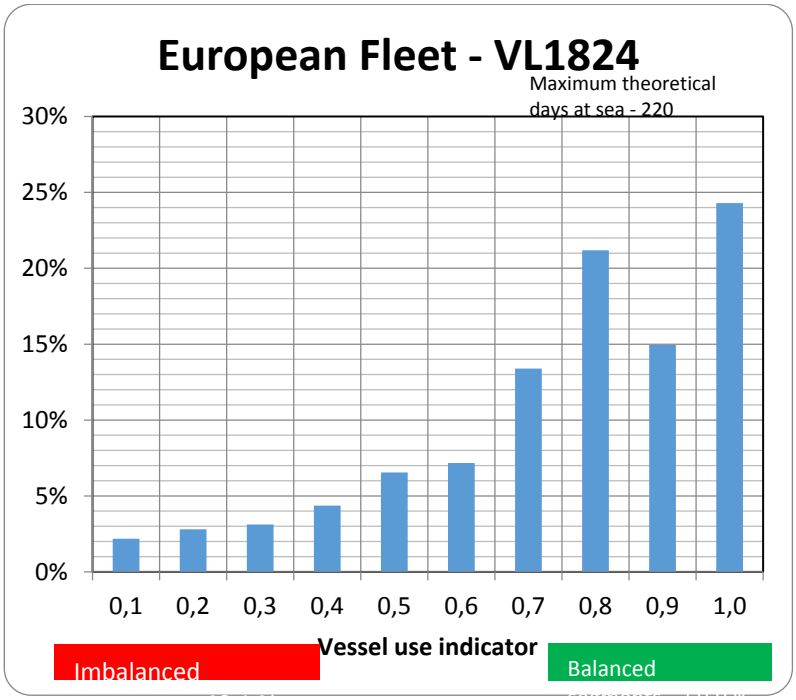
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
0,1 0,2 0,3 0,4 0,5 0,6 0,7 0,8 0,9 1,0
Vessel use indicator
Imbalanced
Balanced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20%
15%
10%
5%
0%
0,1
0,2
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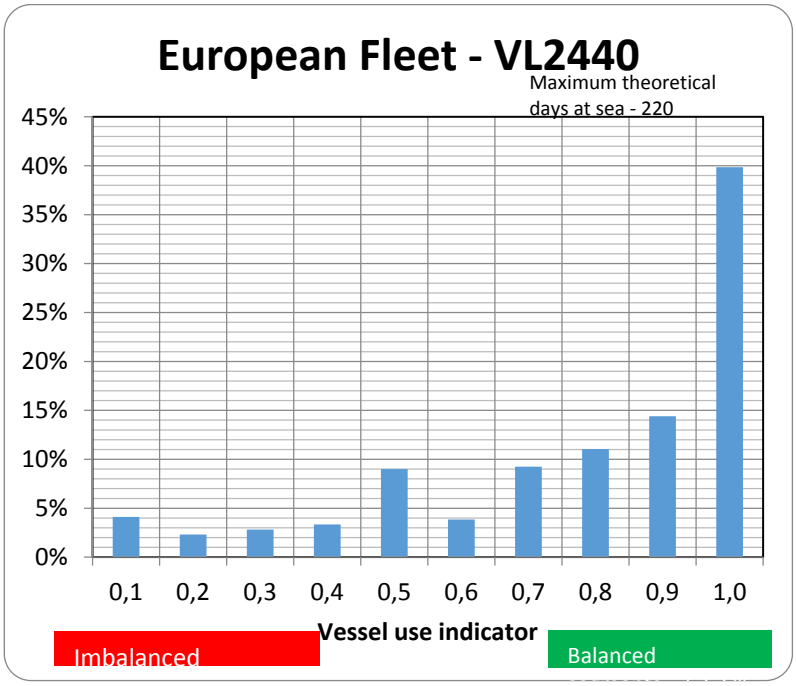
0,4
0,5
0,6
0,7
0,8
0,9
1,0
Vessel use indicator
Imbalanced
Balanced


European Fleet - VL2440
Maximum theoretical days at sea - 220
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
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0,2
0,3
0,4
0,5
0,6
0,7
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0,9
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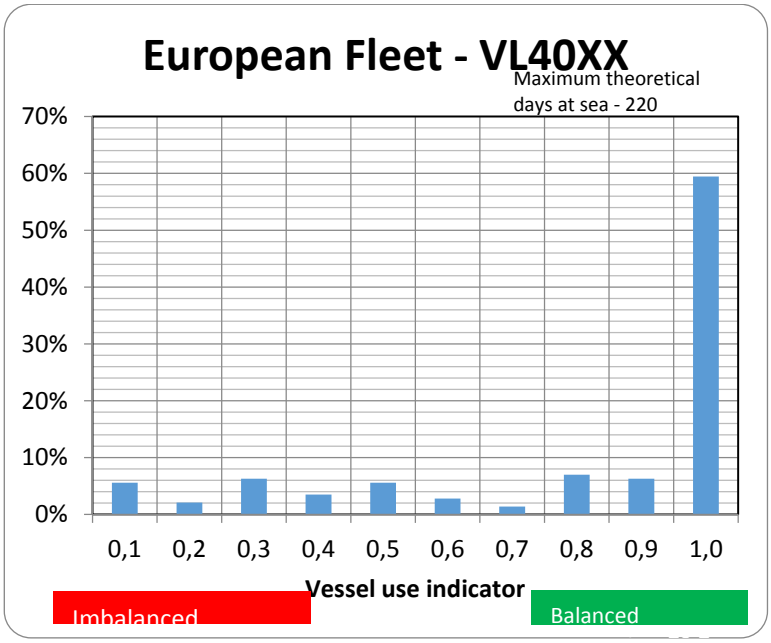
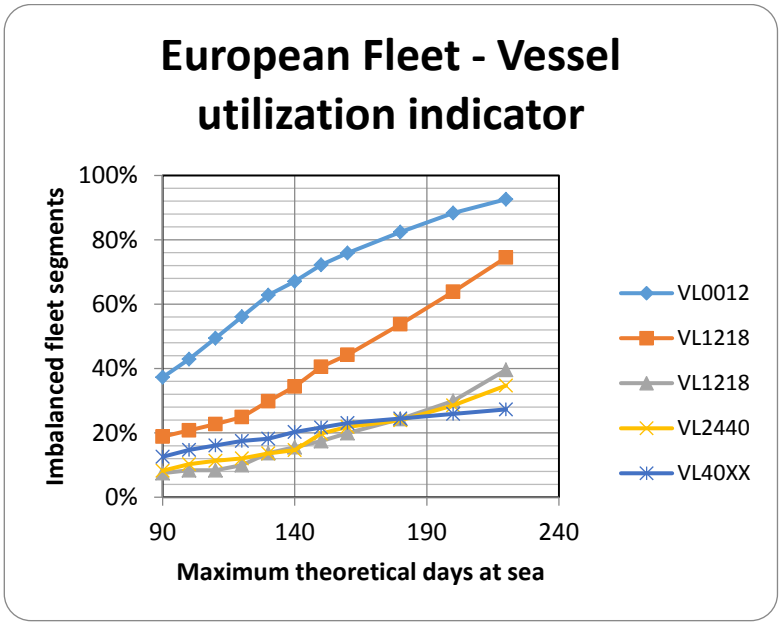
Vessel use indicator
Imbalanced
Balanced





9 ANNEX II – STOCK REFERENCE LIST

The reference list shown below is currently used to divide commercial landings data at species level into stocks; see section on 'Method of Calculating and Presenting the SHI' for further details. Stocks that are not divided are not include in the list. The resulting stock landings data (by value or weight)

was used by the *ad hoc* contractors in the calculation of the Sustainable Harvest Indicator (SHI) and the Stocks at Risk Indicator (SAR) for consideration by STECF EWG 15-17.

Stock	Species code	Sub-region	Stock proportion
anb-8c9a	ANF	27.8.C	2.92
anb-8c9a	MNZ	27.8.C	2.92
anb-8c9a	ANF	27.9.A	2.92
anb-8c9a	MNZ	27.9.A	2.92
anb-gsa05	ANF	37.1.1	2.00
anb-gsa05	MNZ	37.1.1	2.00
anb-gsa05	MON	37.1.1	2.00
anb-gsa06	ANF	37.1.1	2.00
anb-gsa06	MNZ	37.1.1	2.00
anb-gsa06	MON	37.1.1	2.00
ane-gsa17	ANE	37.2.1	2.00
ane-gsa17	ANE	SA 17	2.00
ane-gsa17_18	ANE	37.2.1	2.00
ane-gsa17_18	ANE	SA 17	2.00
anp-8c9a	ANF	27.8.C	1.52
anp-8c9a	MNZ	27.8.C	1.52
anp-8c9a	ANF	27.9.A	1.52
anp-8c9a	MNZ	27.9.A	1.52
ara-gsa01	ARA	37.1.1	3.00
ara-gsa05	ARA	37.1.1	3.00
ara-gsa06	ARA	37.1.1	3.00
ara-gsa09	ARA	37.1.3	2.00
ara-gsa10	ARA	37.1.3	2.00
ars-gsa09	ARS	37.1.3	4.00
ars-gsa10	ARS	37.1.3	4.00
ars-gsa11	ARS	37.1.3	4.00
ars-gsa12_16	ARS	37.1.3	4.00
ars-gsa12_16	ARS	37.2.2	2.00
ars-gsa18	ARS	37.2.2	2.00
bog-gsa25	BOG	37.3.2	2.00
bog-gsa26	BOG	37.3.2	2.00
cod-347d	COD	27.3.A	1.05
cod-kat	COD	27.3.A	23.13
dps-gsa01	DPS	37.1.1	5.00
dps-gsa03	DPS	37.1.1	5.00
dps-gsa04	DPS	37.1.1	5.00
dps-gsa05	DPS	37.1.1	5.00
dps-gsa06	DPS	37.1.1	5.00
dps-gsa09	DPS	37.1.3	3.00
dps-gsa10	DPS	37.1.3	3.00

dps-gsa12_16	DPS	37.1.3	3.00
dps-gsa12_16	DPS	37.2.2	3.00
dps-gsa18	DPS	37.2.2	3.00
dps-gsa19	DPS	37.2.2	3.00
her-2532-gor	HER	27.3.D.28	1.12
her-47d3	HER	27.4.A	2.31
her-67bc	HER	27.6.A	1.99
her-67bc	HER	27.7.B	1.27
her-67bc	HER	27.7.C	1.27
her-irls	HER	27.7.A	1.44
her-irlw	HER	27.6.A	7.33
her-irlw	HER	27.7.B	4.68
her-irlw	HER	27.7.C	4.68
her-nirs	HER	27.7.A	3.29
her-noss	HER	27.4.A	1.76
her-riga	HER	27.3.D.28	9.58
her-vian	HER	27.6.A	2.76
hke-gsa01	HKE	37.1.1	5.00
hke-gsa03	HKE	37.1.1	5.00
hke-gsa05	HKE	37.1.1	5.00
hke-gsa06	HKE	37.1.1	5.00
hke-gsa09	HKE	37.1.3	4.00
hke-gsa10	HKE	37.1.3	4.00
hke-gsa11	HKE	37.1.1	5.00
hke-gsa11	HKE	37.1.3	4.00
hke-gsa12_16	HKE	37.1.3	4.00
hke-gsa12_16	HKE	37.2.2	4.00
hke-gsa12_16	HKE	SA 16	2.00
hke-gsa15_16	HKE	37.2.2	4.00
hke-gsa15_16	HKE	SA 16	2.00
hke-gsa18	HKE	37.2.2	4.00
hke-gsa19	HKE	37.2.2	4.00
mgb-8c9a	LEZ	27.8.C	1.27
mgb-8c9a	MEG	27.8.C	1.27
mgb-8c9a	LEZ	27.9.A	1.27
mgb-8c9a	MEG	27.9.A	1.27
mgw-8c9a	LEZ	27.8.C	4.66
mgw-8c9a	MEG	27.8.C	4.66
mgw-8c9a	LEZ	27.9.A	4.66
mgw-8c9a	MEG	27.9.A	4.66
mulbar-gsa01	MUT	37.1.1	5.00
mulbar-gsa01	MUX	37.1.1	5.00
mulbar-gsa03	MUT	37.1.1	5.00
mulbar-gsa03	MUX	37.1.1	5.00

mulbar-gsa05	MUT	37.1.1	5.00
mulbar-gsa05	MUX	37.1.1	5.00
mulbar-gsa06	MUT	37.1.1	5.00
mulbar-gsa06	MUX	37.1.1	5.00
mulbar-gsa09	MUT	37.1.3	3.00
mulbar-gsa09	MUX	37.1.3	3.00
mulbar-gsa10	MUT	37.1.3	3.00
mulbar-gsa10	MUX	37.1.3	3.00
mulbar-gsa11	MUT	37.1.1	5.00
mulbar-gsa11	MUX	37.1.1	5.00
mulbar-gsa11	MUT	37.1.3	3.00
mulbar-gsa11	MUX	37.1.3	3.00
mulbar-gsa15_16	MUT	37.2.2	3.00
mulbar-gsa15_16	MUX	37.2.2	3.00
mulbar-gsa18	MUT	37.2.2	3.00
mulbar-gsa18	MUX	37.2.2	3.00
mulbar-gsa19	MUT	37.2.2	3.00
mulbar-gsa19	MUX	37.2.2	3.00
mulsur-gsa25	MUR	37.3.2	2.00
mulsur-gsa26	MUR	37.3.2	2.00
nep-11	NEP	27.6.A	3.62
nep-12	NEP	27.6.A	2.92
nep-13a	NEP	27.6.A	2.65
nep-13b	NEP	27.6.A	280.62
nep-14	NEP	27.7.A	25.87
nep-15	NEP	27.7.A	1.07
nep-16	NEP	27.7.B	3.95
nep-17	NEP	27.7.B	1.34
nep-19	NEP	27.7.A	42.55
nep-6	NEP	27.4.B	1.54
nep-7	NEP	27.4.A	1.14
nep-8	NEP	27.4.B	2.86
nep-9	NEP	27.4.A	8.16
nep-gsa05	NEP	37.1.1	2.00
nep-gsa06	NEP	37.1.1	2.00
nep-gsa15_16	NEP	37.2.2	2.00
nep-gsa18	NEP	37.2.2	2.00
pil-gsa01	PIL	37.1.1	2.00
pil-gsa06	PIL	37.1.1	2.00
pil-gsa17	PIL	37.2.1	2.00
pil-gsa17	PIL	SA 17	2.00
pil-gsa17_18	PIL	37.2.1	2.00
pil-gsa17_18	PIL	SA 17	2.00
san-ns1	SAN	27.4.B	1.87

san-ns1	SAN	27.4.C	1.18
san-ns2	SAN	27.4.B	10.17
san-ns2	SAN	27.4.C	6.44
san-ns3	SAN	27.4.B	2.73
whb-gsa01	WHB	37.1.1	2.00
whb-gsa06	WHB	37.1.1	2.00

10 ANNEX III – COMPLIMENTARY DATA FOR THE SUSTAINABLE HARVEST INDICATOR

Information on the number of stocks for which assessments are available and the number of stocks considered overfished (Fcurrent > FM_{SY} or its proxy $F_{0.1}$), provided by MS fleet segment.

Area	Country code	Fleet code	Number of assessed stocks	Number of overfished stocks
AREA27	BEL	BEL-AREA27-DFN-VL1218	7	4
AREA27	BEL	BEL-AREA27-DRB-VL1824	12	8
AREA27	BEL	BEL-AREA27-DTS-VL1824	18	9
AREA27	BEL	BEL-AREA27-DTS-VL2440	27	13
AREA27	BEL	BEL-AREA27-TBB-VL1218	4	3
AREA27	BEL	BEL-AREA27-TBB-VL1824	17	10
AREA27	BEL	BEL-AREA27-TBB-VL2440	26	14
AREA37	BGR	BGR-AREA37-DFN-VL0006	5	5
AREA37	BGR	BGR-AREA37-DFN-VL0612	6	5
AREA37	BGR	BGR-AREA37-DFN-VL1218	3	3
AREA37	BGR	BGR-AREA37-DFN-VL1824	1	1
AREA37	BGR	BGR-AREA37-FPO-VL0006	4	3
AREA37	BGR	BGR-AREA37-FPO-VL0612	5	4
AREA37	BGR	BGR-AREA37-HOK-VL0006	2	2
AREA37	BGR	BGR-AREA37-HOK-VL0612	2	2
AREA37	BGR	BGR-AREA37-PGP-VL0006	1	1

AREA37	BGR	BGR-AREA37-PGP-VL0612	1	1
AREA37	BGR	BGR-AREA37-PGP-VL1218	2	2
AREA37	BGR	BGR-AREA37-PMP-VL0006	4	3
AREA37	BGR	BGR-AREA37-PMP-VL0612	6	5
AREA37	BGR	BGR-AREA37-PMP-VL1218	5	4
AREA37	BGR	BGR-AREA37-PMP-VL1824	6	5
AREA37	BGR	BGR-AREA37-PMP-VL2440	2	2
AREA37	BGR	BGR-AREA37-PS-VL0006	4	3
AREA37	BGR	BGR-AREA37-PS-VL0612	3	2
AREA37	BGR	BGR-AREA37-TM-VL0612	4	3
AREA37	BGR	BGR-AREA37-TM-VL1218	6	5
AREA37	BGR	BGR-AREA37-TM-VL1824	3	2
AREA37	BGR	BGR-AREA37-TM-VL2440	4	3
AREA37	CYP	CYP-AREA37-DTS-VL2440	9	9
AREA37	CYP	CYP-AREA37-PG-VL0612	3	2
AREA37	CYP	CYP-AREA37-PGO-VL0612	2	2
AREA37	CYP	CYP-AREA37-PGP-VL1218	3	2
AREA37	CYP	CYP-AREA37-PS-VL1824	2	1
AREA27	DEU	DEU-AREA27-DFN-VL1218	11	7
AREA27	DEU	DEU-AREA27-DFN-VL2440	10	6
AREA27	DEU	DEU-AREA27-DTS-VL1012	3	3
AREA27	DEU	DEU-AREA27-DTS-VL1218	8	6
AREA27	DEU	DEU-AREA27-DTS-VL1824	12	7
AREA27	DEU	DEU-AREA27-DTS-VL2440	13	7
AREA27	DEU	DEU-AREA27-DTS-VL40XX	10	3
AREA27	DEU	DEU-AREA27-PG-VL0010	7	4
AREA27	DEU	DEU-AREA27-PG-VL1012	3	3
AREA27	DEU	DEU-AREA27-TBB-VL1012	3	2
AREA27	DEU	DEU-AREA27-TBB-VL1218	3	2
AREA27	DEU	DEU-AREA27-TBB-VL1824	8	5
AREA27	DEU	DEU-AREA27-TBB-VL2440	9	4
AREA27	DNK	DNK-AREA27-DRB-VL1012	7	3
AREA27	DNK	DNK-AREA27-DTS-VL0010	11	6
AREA27	DNK	DNK-AREA27-DTS-VL1012	12	6
AREA27	DNK	DNK-AREA27-DTS-VL1218	21	8
AREA27	DNK	DNK-AREA27-DTS-VL1824	19	8
AREA27	DNK	DNK-AREA27-DTS-VL2440	23	8
AREA27	DNK	DNK-AREA27-DTS-VL40XX	23	9
AREA27	DNK	DNK-AREA27-PGP-VL0010	13	6
AREA27	DNK	DNK-AREA27-PGP-VL1012	11	6
AREA27	DNK	DNK-AREA27-PGP-VL1218	11	6
AREA27	DNK	DNK-AREA27-PMP-VL0010	12	6
AREA27	DNK	DNK-AREA27-PMP-VL1012	14	7
AREA27	DNK	DNK-AREA27-PMP-VL1218	18	8

AREA27	DNK	DNK-AREA27-PMP-VL1824	13	5
AREA27	DNK	DNK-AREA27-TBB-VL1218	4	1
AREA27	DNK	DNK-AREA27-TBB-VL1824	11	5
AREA27	DNK	DNK-AREA27-TM-VL1218	14	6
AREA27	DNK	DNK-AREA27-TM-VL40XX	20	7
AREA27	ESP	ESP-AREA27-DFN-VL0010	5	1
AREA27	ESP	ESP-AREA27-DFN-VL1012	9	3
AREA27	ESP	ESP-AREA27-DFN-VL1218	10	5
AREA27	ESP	ESP-AREA27-DFN-VL1824	8	3
AREA27	ESP	ESP-AREA27-DFN-VL2440	8	3
AREA27	ESP	ESP-AREA27-DRB-VL0010	6	3
AREA27	ESP	ESP-AREA27-DRB-VL1218	2	2
AREA27	ESP	ESP-AREA27-DTS-VL1012	1	1
AREA27	ESP	ESP-AREA27-DTS-VL1218	7	3
AREA27	ESP	ESP-AREA27-DTS-VL1824	7	3
AREA27	ESP	ESP-AREA27-DTS-VL2440	22	7
AREA27	ESP	ESP-AREA27-DTS-VL40XX	14	5
AREA27	ESP	ESP-AREA27-FPO-VL1012	8	3
AREA27	ESP	ESP-AREA27-FPO-VL1218	8	3
AREA27	ESP	ESP-AREA27-HOK-VL0010	3	1
AREA27	ESP	ESP-AREA27-HOK-VL1012	7	2
AREA27	ESP	ESP-AREA27-HOK-VL1218	10	5
AREA27	ESP	ESP-AREA27-HOK-VL1824	8	2
AREA27	ESP	ESP-AREA27-HOK-VL2440	9	4
AREA27	ESP	ESP-AREA27-PGP-VL0010	8	3
AREA27	ESP	ESP-AREA27-PGP-VL1012	10	5
AREA27	ESP	ESP-AREA27-PGP-VL1218	10	5
AREA27	ESP	ESP-AREA27-PGP-VL1824	9	4
AREA27	ESP	ESP-AREA27-PGP-VL2440	11	5
AREA27	ESP	ESP-AREA27-PMP-VL1012	9	4
AREA27	ESP	ESP-AREA27-PMP-VL1218	7	3
AREA27	ESP	ESP-AREA27-PMP-VL1824	4	1
AREA27	ESP	ESP-AREA27-PMP-VL2440	2	
AREA27	ESP	ESP-AREA27-PS-VL0010	1	
AREA27	ESP	ESP-AREA27-PS-VL1012	6	3
AREA27	ESP	ESP-AREA27-PS-VL1218	6	2
AREA27	ESP	ESP-AREA27-PS-VL1824	5	2
AREA27	ESP	ESP-AREA27-PS-VL2440	4	2
AREA37	ESP	ESP-AREA37-DFN-VL0612	17	16
AREA37	ESP	ESP-AREA37-DFN-VL1218	13	12
AREA37	ESP	ESP-AREA37-DRB-VL0006	1	1
AREA37	ESP	ESP-AREA37-DRB-VL0612	2	2
AREA37	ESP	ESP-AREA37-DRB-VL1218	1	1
AREA37	ESP	ESP-AREA37-DTS-VL0612	12	11

AREA37	ESP	ESP-AREA37-DTS-VL1218	27	25
AREA37	ESP	ESP-AREA37-DTS-VL1824	46	42
AREA37	ESP	ESP-AREA37-DTS-VL2440	27	25
AREA37	ESP	ESP-AREA37-FPO-VL0612	4	4
AREA37	ESP	ESP-AREA37-FPO-VL1218	3	3
AREA37	ESP	ESP-AREA37-FPO-VL2440	1	1
AREA37	ESP	ESP-AREA37-HOK-VL0006	1	1
AREA37	ESP	ESP-AREA37-HOK-VL0612	12	10
AREA37	ESP	ESP-AREA37-HOK-VL1218	14	13
AREA37	ESP	ESP-AREA37-HOK-VL1824	8	7
AREA37	ESP	ESP-AREA37-HOK-VL2440	2	1
AREA37	ESP	ESP-AREA37-PGP-VL0006	15	12
AREA37	ESP	ESP-AREA37-PGP-VL0612	25	21
AREA37	ESP	ESP-AREA37-PGP-VL1218	9	9
AREA37	ESP	ESP-AREA37-PMP-VL0612	11	10
AREA37	ESP	ESP-AREA37-PMP-VL1218	6	6
AREA37	ESP	ESP-AREA37-PS-VL0612	10	8
AREA37	ESP	ESP-AREA37-PS-VL1218	8	6
AREA37	ESP	ESP-AREA37-PS-VL1824	9	7
AREA37	ESP	ESP-AREA37-PS-VL2440	2	1
AREA37	ESP	ESP-AREA37-PS-VL40XX	1	
OFR	ESP	ESP-OFR-HOK-VL1218	1	1
OFR	ESP	ESP-OFR-HOK-VL1824	3	1
OFR	ESP	ESP-OFR-HOK-VL2440	3	
OFR	ESP	ESP-OFR-PGP-VL0010	5	3
AREA27	EST	EST-AREA27-DTS-VL1218	2	1
AREA27	EST	EST-AREA27-PG-VL0010	3	1
AREA27	EST	EST-AREA27-PG-VL1012	2	
AREA27	EST	EST-AREA27-TM-VL1218	2	1
AREA27	EST	EST-AREA27-TM-VL1824	3	1
AREA27	EST	EST-AREA27-TM-VL2440	3	1
AREA27	FIN	FIN-AREA27-PG-VL0010	3	2
AREA27	FIN	FIN-AREA27-PG-VL1012	3	2
AREA27	FIN	FIN-AREA27-TM-VL1218	5	3
AREA27	FIN	FIN-AREA27-TM-VL1824	3	2
AREA27	FIN	FIN-AREA27-TM-VL2440	3	2
AREA27	FRA	FRA-AREA27-DFN-VL0010	19	10
AREA27	FRA	FRA-AREA27-DFN-VL1012	25	12
AREA27	FRA	FRA-AREA27-DFN-VL1218	24	13
AREA27	FRA	FRA-AREA27-DFN-VL1824	24	14
AREA27	FRA	FRA-AREA27-DFN-VL2440	13	6
AREA27	FRA	FRA-AREA27-DRB-VL0010	12	7
AREA27	FRA	FRA-AREA27-DRB-VL1012	16	10
AREA27	FRA	FRA-AREA27-DRB-VL1218	14	8

AREA27	FRA	FRA-AREA27-DRB-VL1824	10	6
AREA27	FRA	FRA-AREA27-DRB-VL2440	3	2
AREA27	FRA	FRA-AREA27-DTS-VL0010	14	9
AREA27	FRA	FRA-AREA27-DTS-VL1012	19	10
AREA27	FRA	FRA-AREA27-DTS-VL1218	22	11
AREA27	FRA	FRA-AREA27-DTS-VL1824	35	17
AREA27	FRA	FRA-AREA27-DTS-VL2440	32	16
AREA27	FRA	FRA-AREA27-DTS-VL40XX	13	5
AREA27	FRA	FRA-AREA27-FPO-VL0010	15	9
AREA27	FRA	FRA-AREA27-FPO-VL1012	13	7
AREA27	FRA	FRA-AREA27-FPO-VL1218	2	1
AREA27	FRA	FRA-AREA27-HOK-VL0010	16	9
AREA27	FRA	FRA-AREA27-HOK-VL1012	15	10
AREA27	FRA	FRA-AREA27-HOK-VL1218	4	3
AREA27	FRA	FRA-AREA27-HOK-VL1824	5	4
AREA27	FRA	FRA-AREA27-HOK-VL2440	8	4
AREA27	FRA	FRA-AREA27-MGO-VL0010	12	8
AREA27	FRA	FRA-AREA27-MGP-VL0010	10	6
AREA27	FRA	FRA-AREA27-MGP-VL1012	12	7
AREA27	FRA	FRA-AREA27-MGP-VL1218	14	9
AREA27	FRA	FRA-AREA27-MGP-VL1824	16	9
AREA27	FRA	FRA-AREA27-MGP-VL2440	9	5
AREA27	FRA	FRA-AREA27-PGO-VL0010	5	4
AREA27	FRA	FRA-AREA27-PGP-VL0010	13	9
AREA27	FRA	FRA-AREA27-PGP-VL1012	13	7
AREA27	FRA	FRA-AREA27-PGP-VL1218	6	5
AREA27	FRA	FRA-AREA27-PMP-VL0010	13	9
AREA27	FRA	FRA-AREA27-PMP-VL1012	13	9
AREA27	FRA	FRA-AREA27-PMP-VL1218	10	6
AREA27	FRA	FRA-AREA27-PS-VL0010	4	3
AREA27	FRA	FRA-AREA27-PS-VL1012	3	1
AREA27	FRA	FRA-AREA27-PS-VL1218	10	6
AREA27	FRA	FRA-AREA27-PS-VL1824	6	2
AREA27	FRA	FRA-AREA27-TBB-VL1012	5	3
AREA27	FRA	FRA-AREA27-TBB-VL1218	9	6
AREA27	FRA	FRA-AREA27-TM-VL1012	6	4
AREA27	FRA	FRA-AREA27-TM-VL1218	12	6
AREA27	FRA	FRA-AREA27-TM-VL1824	16	9
AREA27	FRA	FRA-AREA27-TM-VL2440	13	6
AREA27	FRA	FRA-AREA27-TM-VL40XX	7	2
AREA37	FRA	FRA-AREA37-DFN-VL0006	8	7
AREA37	FRA	FRA-AREA37-DFN-VL0612	18	15
AREA37	FRA	FRA-AREA37-DFN-VL1218	5	4
AREA37	FRA	FRA-AREA37-DRB-VL0612	2	2

AREA37	FRA	FRA-AREA37-DTS-VL1218	14	12
AREA37	FRA	FRA-AREA37-DTS-VL1824	19	16
AREA37	FRA	FRA-AREA37-DTS-VL2440	12	11
AREA37	FRA	FRA-AREA37-FPO-VL0006	2	2
AREA37	FRA	FRA-AREA37-FPO-VL0612	14	12
AREA37	FRA	FRA-AREA37-FPO-VL1218	2	2
AREA37	FRA	FRA-AREA37-HOK-VL0006	2	2
AREA37	FRA	FRA-AREA37-HOK-VL0612	11	9
AREA37	FRA	FRA-AREA37-HOK-VL1218	3	2
AREA37	FRA	FRA-AREA37-MGO-VL0612	3	2
AREA37	FRA	FRA-AREA37-MGP-VL1824	2	2
AREA37	FRA	FRA-AREA37-MGP-VL2440	3	2
AREA37	FRA	FRA-AREA37-PGO-VL0006	1	1
AREA37	FRA	FRA-AREA37-PGP-VL0006	2	2
AREA37	FRA	FRA-AREA37-PGP-VL0612	12	11
AREA37	FRA	FRA-AREA37-PGP-VL1218	3	2
AREA37	FRA	FRA-AREA37-PMP-VL0612	18	15
AREA37	FRA	FRA-AREA37-PMP-VL1218	2	1
AREA37	FRA	FRA-AREA37-PS-VL0612	3	2
AREA37	FRA	FRA-AREA37-PS-VL1218	1	
AREA37	FRA	FRA-AREA37-PS-VL2440	1	
AREA37	FRA	FRA-AREA37-PS-VL40XX	1	
AREA37	FRA	FRA-AREA37-TM-VL2440	3	2
AREA27	GBR	GBR-AREA27-DFN-VL0010	21	10
AREA27	GBR	GBR-AREA27-DFN-VL1012	17	9
AREA27	GBR	GBR-AREA27-DFN-VL1218	13	8
AREA27	GBR	GBR-AREA27-DFN-VL1824	12	7
AREA27	GBR	GBR-AREA27-DFN-VL2440	5	3
AREA27	GBR	GBR-AREA27-DRB-VL0010	24	12
AREA27	GBR	GBR-AREA27-DRB-VL1012	16	9
AREA27	GBR	GBR-AREA27-DRB-VL1218	29	13
AREA27	GBR	GBR-AREA27-DRB-VL1824	7	6
AREA27	GBR	GBR-AREA27-DRB-VL2440	16	10
AREA27	GBR	GBR-AREA27-DTS-VL0010	34	14
AREA27	GBR	GBR-AREA27-DTS-VL1012	30	13
AREA27	GBR	GBR-AREA27-DTS-VL1218	38	16
AREA27	GBR	GBR-AREA27-DTS-VL1824	35	13
AREA27	GBR	GBR-AREA27-DTS-VL2440	40	16
AREA27	GBR	GBR-AREA27-DTS-VL40XX	19	9
AREA27	GBR	GBR-AREA27-FPO-VL0010	32	13
AREA27	GBR	GBR-AREA27-FPO-VL1012	24	10
AREA27	GBR	GBR-AREA27-FPO-VL1218	24	10
AREA27	GBR	GBR-AREA27-HOK-VL0010	31	12
AREA27	GBR	GBR-AREA27-HOK-VL1012	13	5

AREA27	GBR	GBR-AREA27-HOK-VL2440	6	2
AREA27	GBR	GBR-AREA27-MGP-VL0010	9	4
AREA27	GBR	GBR-AREA27-PGP-VL0010	19	10
AREA27	GBR	GBR-AREA27-PGP-VL1012	5	3
AREA27	GBR	GBR-AREA27-PMP-VL0010	11	6
AREA27	GBR	GBR-AREA27-TBB-VL0010	5	3
AREA27	GBR	GBR-AREA27-TBB-VL1012	7	4
AREA27	GBR	GBR-AREA27-TBB-VL1218	13	8
AREA27	GBR	GBR-AREA27-TBB-VL1824	14	9
AREA27	GBR	GBR-AREA27-TBB-VL2440	17	10
AREA27	GBR	GBR-AREA27-TBB-VL40XX	9	4
AREA27	GBR	GBR-AREA27-TM-VL0010	6	3
AREA27	GBR	GBR-AREA27-TM-VL1218	14	5
AREA27	GBR	GBR-AREA27-TM-VL40XX	12	4
OFR	GBR	GBR-OFR-DTS-VL40XX	2	
AREA37	HRV	HRV-AREA37-DFN-VL0006	8	8
AREA37	HRV	HRV-AREA37-DFN-VL0612	8	8
AREA37	HRV	HRV-AREA37-DFN-VL1218	3	3
AREA37	HRV	HRV-AREA37-DRB-VL0006	1	1
AREA37	HRV	HRV-AREA37-DRB-VL0612	4	4
AREA37	HRV	HRV-AREA37-DRB-VL1218	8	8
AREA37	HRV	HRV-AREA37-DRB-VL1824	3	3
AREA37	HRV	HRV-AREA37-DRB-VL2440	1	1
AREA37	HRV	HRV-AREA37-DTS-VL0006	6	6
AREA37	HRV	HRV-AREA37-DTS-VL0612	8	8
AREA37	HRV	HRV-AREA37-DTS-VL1218	8	8
AREA37	HRV	HRV-AREA37-DTS-VL1824	8	8
AREA37	HRV	HRV-AREA37-DTS-VL2440	4	4
AREA37	HRV	HRV-AREA37-FPO-VL0006	5	5
AREA37	HRV	HRV-AREA37-FPO-VL0612	8	8
AREA37	HRV	HRV-AREA37-HOK-VL0006	3	3
AREA37	HRV	HRV-AREA37-HOK-VL0612	6	6
AREA37	HRV	HRV-AREA37-HOK-VL1218	4	4
AREA37	HRV	HRV-AREA37-MGO-VL0006	8	8
AREA37	HRV	HRV-AREA37-MGO-VL0612	8	8
AREA37	HRV	HRV-AREA37-PGO-VL0006	1	1
AREA37	HRV	HRV-AREA37-PGO-VL0612	2	2
AREA37	HRV	HRV-AREA37-PGP-VL0006	2	2
AREA37	HRV	HRV-AREA37-PGP-VL0612	3	3
AREA37	HRV	HRV-AREA37-PMP-VL0006	5	5
AREA37	HRV	HRV-AREA37-PMP-VL0612	6	6
AREA37	HRV	HRV-AREA37-PMP-VL1218	2	2
AREA37	HRV	HRV-AREA37-PS-VL0612	8	8
AREA37	HRV	HRV-AREA37-PS-VL1218	7	7

AREA37	HRV	HRV-AREA37-PS-VL1824	6	6
AREA37	HRV	HRV-AREA37-PS-VL2440	4	4
AREA37	HRV	HRV-AREA37-PS-VL40XX	4	4
AREA27	IRL	IRL-AREA27-DFN-VL1012	10	5
AREA27	IRL	IRL-AREA27-DFN-VL1218	11	4
AREA27	IRL	IRL-AREA27-DFN-VL1824	9	5
AREA27	IRL	IRL-AREA27-DFN-VL2440	7	4
AREA27	IRL	IRL-AREA27-DRB-VL1012	1	
AREA27	IRL	IRL-AREA27-DTS-VL1012	17	9
AREA27	IRL	IRL-AREA27-DTS-VL1218	26	11
AREA27	IRL	IRL-AREA27-DTS-VL1824	31	12
AREA27	IRL	IRL-AREA27-DTS-VL2440	30	12
AREA27	IRL	IRL-AREA27-FPO-VL1012	19	7
AREA27	IRL	IRL-AREA27-FPO-VL1218	7	3
AREA27	IRL	IRL-AREA27-HOK-VL1012	1	
AREA27	IRL	IRL-AREA27-PMP-VL1218	3	
AREA27	IRL	IRL-AREA27-TBB-VL1824	9	5
AREA27	IRL	IRL-AREA27-TBB-VL2440	9	5
AREA27	IRL	IRL-AREA27-TM-VL1012	9	4
AREA27	IRL	IRL-AREA27-TM-VL1218	13	6
AREA27	IRL	IRL-AREA27-TM-VL1824	19	6
AREA27	IRL	IRL-AREA27-TM-VL2440	17	6
AREA27	IRL	IRL-AREA27-TM-VL40XX	10	3
AREA37	ITA	ITA-AREA37-DRB-VL1218	4	4
AREA37	ITA	ITA-AREA37-DTS-VL0612	36	33
AREA37	ITA	ITA-AREA37-DTS-VL1218	49	46
AREA37	ITA	ITA-AREA37-DTS-VL1824	50	47
AREA37	ITA	ITA-AREA37-DTS-VL2440	38	36
AREA37	ITA	ITA-AREA37-HOK-VL1218	9	9
AREA37	ITA	ITA-AREA37-PGP-VL0006	20	19
AREA37	ITA	ITA-AREA37-PGP-VL0612	29	27
AREA37	ITA	ITA-AREA37-PGP-VL1218	20	19
AREA37	ITA	ITA-AREA37-PMP-VL0612	1	1
AREA37	ITA	ITA-AREA37-PMP-VL1218	1	1
AREA37	ITA	ITA-AREA37-PS-VL0612	11	11
AREA37	ITA	ITA-AREA37-PS-VL1218	9	8
AREA37	ITA	ITA-AREA37-PS-VL1824	2	2
AREA37	ITA	ITA-AREA37-PS-VL2440	7	7
AREA37	ITA	ITA-AREA37-TBB-VL1218	4	4
AREA37	ITA	ITA-AREA37-TBB-VL1824	4	4
AREA37	ITA	ITA-AREA37-TBB-VL2440	4	4
AREA37	ITA	ITA-AREA37-TM-VL1218	8	8
AREA37	ITA	ITA-AREA37-TM-VL1824	5	5
AREA37	ITA	ITA-AREA37-TM-VL2440	6	6

AREA27	LTU	LTU-AREA27-DFN-VL1012	1	
AREA27	LTU	LTU-AREA27-PG-VL0010	1	
AREA27	LTU	LTU-AREA27-TM-VL2440	3	1
AREA27	LTU	LTU-AREA27-TM-VL40XX	3	1
AREA27	LVA	LVA-AREA27-DFN-VL2440	1	1
AREA27	LVA	LVA-AREA27-PGP-VL0010	3	1
AREA27	LVA	LVA-AREA27-TM-VL1218	3	1
AREA27	LVA	LVA-AREA27-TM-VL2440	3	1
AREA37	MLT	MLT-AREA37-DFN-VL0006	3	3
AREA37	MLT	MLT-AREA37-DFN-VL0612	5	4
AREA37	MLT	MLT-AREA37-DTS-VL1824	17	16
AREA37	MLT	MLT-AREA37-DTS-VL2440	17	16
AREA37	MLT	MLT-AREA37-HOK-VL0612	9	8
AREA37	MLT	MLT-AREA37-HOK-VL1218	5	4
AREA37	MLT	MLT-AREA37-HOK-VL1824	6	5
AREA37	MLT	MLT-AREA37-MGO-VL0612	4	3
AREA37	MLT	MLT-AREA37-MGO-VL1218	1	
AREA37	MLT	MLT-AREA37-PGP-VL0006	9	8
AREA37	MLT	MLT-AREA37-PGP-VL0612	8	8
AREA37	MLT	MLT-AREA37-PGP-VL1218	1	
AREA37	MLT	MLT-AREA37-PGP-VL1824	5	4
AREA37	MLT	MLT-AREA37-PMP-VL0006	4	4
AREA37	MLT	MLT-AREA37-PMP-VL0612	12	11
AREA37	MLT	MLT-AREA37-PMP-VL1218	1	
AREA37	MLT	MLT-AREA37-PMP-VL1824	1	
AREA37	MLT	MLT-AREA37-PS-VL2440	1	
AREA37	MLT	MLT-AREA37-TM-VL2440	4	4
AREA27	NLD	NLD-AREA27-DFN-VL1218	5	3
AREA27	NLD	NLD-AREA27-DFN-VL1824	9	5
AREA27	NLD	NLD-AREA27-DRB-VL2440	1	1
AREA27	NLD	NLD-AREA27-DTS-VL0010	4	3
AREA27	NLD	NLD-AREA27-DTS-VL1824	13	7
AREA27	NLD	NLD-AREA27-DTS-VL2440	15	8
AREA27	NLD	NLD-AREA27-PG-VL0010	7	3
AREA27	NLD	NLD-AREA27-PG-VL1012	5	3
AREA27	NLD	NLD-AREA27-TBB-VL0010	4	3
AREA27	NLD	NLD-AREA27-TBB-VL1218	5	3
AREA27	NLD	NLD-AREA27-TBB-VL1824	9	5
AREA27	NLD	NLD-AREA27-TBB-VL2440	11	6
AREA27	NLD	NLD-AREA27-TBB-VL40XX	11	6
AREA27	NLD	NLD-AREA27-TM-VL40XX	8	3
AREA27	POL	POL-AREA27-DFN-VL1218	3	2
AREA27	POL	POL-AREA27-DTS-VL1218	4	3
AREA27	POL	POL-AREA27-DTS-VL1824	4	3

AREA27	POL	POL-AREA27-PG-VL0010	4	3
AREA27	POL	POL-AREA27-PG-VL1012	4	3
AREA27	POL	POL-AREA27-TM-VL1824	4	3
AREA27	POL	POL-AREA27-TM-VL2440	5	3
AREA27	PRT	AZO-AREA27-DFN-VL0010	2	
AREA27	PRT	AZO-AREA27-HOK-VL0010	2	
AREA27	PRT	AZO-AREA27-HOK-VL1012	2	
AREA27	PRT	AZO-AREA27-HOK-VL1218	2	
AREA27	PRT	AZO-AREA27-HOK-VL2440	2	
AREA27	PRT	AZO-AREA27-PS-VL0010	2	
AREA27	PRT	AZO-AREA27-PS-VL1012	1	
AREA27	PRT	PRT-AREA27-DFN-VL0010	8	3
AREA27	PRT	PRT-AREA27-DFN-VL1012	9	4
AREA27	PRT	PRT-AREA27-DFN-VL1218	18	12
AREA27	PRT	PRT-AREA27-DFN-VL1824	9	3
AREA27	PRT	PRT-AREA27-DRB-VL1012	1	1
AREA27	PRT	PRT-AREA27-DTS-VL0010	7	3
AREA27	PRT	PRT-AREA27-DTS-VL1218	10	5
AREA27	PRT	PRT-AREA27-DTS-VL1824	27	21
AREA27	PRT	PRT-AREA27-DTS-VL2440	21	15
AREA27	PRT	PRT-AREA27-DTS-VL40XX	2	
AREA27	PRT	PRT-AREA27-FPO-VL0010	6	3
AREA27	PRT	PRT-AREA27-FPO-VL1012	4	1
AREA27	PRT	PRT-AREA27-FPO-VL1218	9	4
AREA27	PRT	PRT-AREA27-FPO-VL1824	8	4
AREA27	PRT	PRT-AREA27-HOK-VL0010	9	3
AREA27	PRT	PRT-AREA27-HOK-VL1012	6	1
AREA27	PRT	PRT-AREA27-HOK-VL1218	8	3
AREA27	PRT	PRT-AREA27-HOK-VL1824	5	1
AREA27	PRT	PRT-AREA27-HOK-VL2440	6	1
AREA27	PRT	PRT-AREA27-MGO-VL0010	3	1
AREA27	PRT	PRT-AREA27-MGO-VL1012	3	1
AREA27	PRT	PRT-AREA27-PGP-VL0010	10	4
AREA27	PRT	PRT-AREA27-PGP-VL1012	6	3
AREA27	PRT	PRT-AREA27-PGP-VL1218	10	3
AREA27	PRT	PRT-AREA27-PMP-VL0010	5	1
AREA27	PRT	PRT-AREA27-PS-VL0010	4	1
AREA27	PRT	PRT-AREA27-PS-VL1012	8	3
AREA27	PRT	PRT-AREA27-PS-VL1218	6	3
AREA27	PRT	PRT-AREA27-PS-VL1824	5	3
AREA27	PRT	PRT-AREA27-PS-VL2440	5	1
AREA27	PRT	PRT-AREA27-TBB-VL0010	4	1
AREA27	PRT	PRT-AREA27-TBB-VL1012	3	1
OFR	PRT	PRT-OFR-DTS-VL2440	1	1

OFR	PRT	PRT-OFR-HOK-VL2440	3	1
AREA37	ROU	ROU-AREA37-PG-VL0006	6	5
AREA37	ROU	ROU-AREA37-PG-VL0612	6	5
AREA37	ROU	ROU-AREA37-PMP-VL0612	4	3
AREA37	ROU	ROU-AREA37-PMP-VL1218	3	3
AREA37	ROU	ROU-AREA37-PMP-VL2440	6	5
AREA37	SVN	SVN-AREA37-DFN-VL0006	6	6
AREA37	SVN	SVN-AREA37-DFN-VL0612	8	8
AREA37	SVN	SVN-AREA37-DTS-VL1218	6	6
AREA37	SVN	SVN-AREA37-PS-VL1218	6	6
AREA27	SWE	SWE-AREA27-DFN-VL0010	13	7
AREA27	SWE	SWE-AREA27-DFN-VL1012	13	7
AREA27	SWE	SWE-AREA27-DFN-VL1218	6	5
AREA27	SWE	SWE-AREA27-DTS-VL0010	8	4
AREA27	SWE	SWE-AREA27-DTS-VL1012	13	7
AREA27	SWE	SWE-AREA27-DTS-VL1218	13	7
AREA27	SWE	SWE-AREA27-DTS-VL1824	18	8
AREA27	SWE	SWE-AREA27-DTS-VL2440	18	8
AREA27	SWE	SWE-AREA27-FPO-VL0010	11	6
AREA27	SWE	SWE-AREA27-FPO-VL1012	9	5
AREA27	SWE	SWE-AREA27-FPO-VL1218	1	
AREA27	SWE	SWE-AREA27-HOK-VL0010	7	3
AREA27	SWE	SWE-AREA27-HOK-VL1012	5	3
AREA27	SWE	SWE-AREA27-HOK-VL1218	1	1
AREA27	SWE	SWE-AREA27-MGP-VL2440	6	2
AREA27	SWE	SWE-AREA27-MGP-VL40XX	7	2
AREA27	SWE	SWE-AREA27-PGP-VL0010	7	4
AREA27	SWE	SWE-AREA27-PGP-VL1012	4	2
AREA27	SWE	SWE-AREA27-PMP-VL0010	4	2
AREA27	SWE	SWE-AREA27-PMP-VL1012	6	3
AREA27	SWE	SWE-AREA27-PS-VL1012	1	
AREA27	SWE	SWE-AREA27-PS-VL1218	1	
AREA27	SWE	SWE-AREA27-TM-VL1824	11	6
AREA27	SWE	SWE-AREA27-TM-VL2440	11	5
AREA27	SWE	SWE-AREA27-TM-VL40XX	13	5

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Authors:

STECF members:
Graham, N., J., Abella, J. A., Andersen, J., Bailey, N., Bertignac, M., Cardinale, M., Curtis, H., Daskalov, G., Delaney, A., Döring, R., Garcia Rodriguez, M., Gascuel, D., Gustavsson, T., Jennings, S., Kenny, A., Kraak, S., Kuikka, S., Malvarosa, L., Martin, P., Murua, H., Nord, J., Nowakowski, P., Prellezo, R., Sala, A., Scarcella, G., Somarakis, S., Stransky, C., Theret, F., Ulrich, C., Vanhee, W. & Van Oostenbrugge, H.

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