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SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES – 65th PLENARY REPORT (PLEN-20-03)

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Abstract

Commission Decision of 25 February 2016 setting up a Scientific, Technical and Economic Committee for Fisheries, C(2016) 1084, OJ C 74, 26.2.2016, p. 4–10. The Commission may consult the group on any matter relating to marine and fisheries biology, fishing gear technology, fisheries economics, fisheries governance, ecosystem effects of fisheries, aquaculture or similar disciplines. The Scientific, Technical and Economic Committee for Fisheries held its 65th plenary as virtual meeting from 9 to 13 November 2020.

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65th PLENARY REPORT OF THE SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (PLEN-20-03)

Virtual Meeting

9-13 November 2020

1. INTRODUCTION

The STECF hold its winter plenary as virtual meeting on 9-13 November 2020 with STECF members addressing the ToRs from their home offices.

2. LIST OF PARTICIPANTS

The meeting was attended by 31 members of the STECF, two invited experts, and eight JRC personnel. 14 Directorate General Maritime Affairs and Fisheries (DG MARE) attended parts of the meeting. Section eight of this report provides a detailed participant list with contact details. The STECF members Leyla Knittweiss and Thomas Catchpole were unable to attend the meeting.

3. INFORMATION TO THE PLENARY

STECF-PLEN-21-01

The spring 2021 STECF plenary meeting STECF-PLEN-21-01 is planned to take place as virtual meeting, 22-26 March 2021, chaired by Clara Ulrich

The current planning of EWGs shifted from 2020 to the January-March 2021 period is as follows:

EWG-20-12 The EU Aquaculture Sector – Economic report 2020

The EWG is planned to take place as virtual meeting, 1-5 February 2021, chaired by Rasmus Nielsen.

EWG-20-18 Revision of DCF Work Plan and Annual Report templates and guidelines

The EU MAP revision is currently in the last consultation step and the Commission will soon legally adopt the final version.

Work plan and annual report templates and guidelines need to be revised to reflect changes introduced in the multiannual Union programme (EU MAP) for the collection and

management of data; they should be improved after being used in several yearly assessment circles, to address new developments and identified shortcomings. The EWG will be fed with the results of the October ad-hoc contracts, including the feedback from the EWG 20-16.

The EWG is planned to take place as virtual meeting, 8-12 February 2021, co-chaired by Christoph Stransky and Evelina Sabatella.

4. STECF INITIATIVES

No STECF initiatives were discussed during the meeting.

5. ASSESSMENT OF STECF EWG REPORTS

5.1 EWG 20-09 Stock assessments in the Western Mediterranean Sea 2020

Request to the STECF

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

STECF observations

The working group was held remotely, from 7 to 18 September 2020. The meeting was attended by 20 experts in total, including three STECF members and four JRC experts. One DG MARE representative and two observers also attended the meeting. The objective of the EWG 20-09 was to carry out demersal stock assessments in the western Mediterranean as defined in the EWG ToRs.

STECF comments

STECF acknowledges that the EWG has addressed adequately all ToRs. STECF notes that the EWG has carefully reviewed the quality of the assessments produced. Some analyses have been considered suitable for short term forecasts.

Table 5.1.1 Summary of the work attempted and basis for any advice. A4a is an age based assessment method, STF is a standard short term projection with assumptions of status quo F and historic recruitment. Index refers to the ICES Category 3 approach to advice for stocks without analytic assessments[1].

Area	Common Species name	2019 Assessment	2020 Assessment
1_5_6_7	Hake	a4a STF	**a4a STF**
1_5_6_7	Deep-water rose shrimp	2018 Index	A4a, XSA **Index**
1	Red Mullet	a4a STF	**a4a STF**
5	Striped Red Mullet	a4a STF	**a4a STF**
6	Red Mullet	a4a STF	**a4a STF**
7	Red Mullet	a4a STF	**a4a STF**

1 https://www.ices.dk/sites/pub/Publication%20Reports/Advice/2018/2018/Introduction_to_advice_2018.pdf

5	Norway lobster	Index (2019)*	a4a, XSA, **Index (2019)**
6	Norway lobster	a4a STF	**a4a STF**
8_9_10_11	Hake	a4a STF	**a4a STF**
9_10_11	Deep-water rose shrimp	a4a STF	**a4a STF**
9	Red Mullet	a4a STF	**a4a STF**
10	Red Mullet	a4a STF	**a4a STF**
9	Norway lobster	a4a STF	**a4a STF**
11	Norway lobster	2018 Index	a4a, **Index**
1	Blue and red shrimp	a4a STF	**a4a STF**
5	Blue and red shrimp	2018 Index	a4a, XSA, **Index**
6_7	Blue and red shrimp	a4a STF	**a4a STF**
9_10_11	Blue and red shrimp	a4a STF	**a4a STF**
9_10_11	Giant red shrimp	a4a STF	**a4a STF**

* advice based on STECF EWG 19 10 held in 2019

A total of 19 area/species combinations were evaluated (Tables 5.1.1 and 5.1.2). The EWG carried out short term forecasts for 15 age-based assessments. Catch advice for four stocks is based on biomass index methods.

The main results are summarized in the bullet point list below and in Table 5.1.2. Overall, the assessments indicate that 13 out of the 19 stocks are being significantly overfished, five are being fished close to F_{MSY} and one is under-exploited.

- Hake in GSA 1_5_6_7: the biomass is increasing. Catches should be reduced by at least 77% to reach F_{MSY} in 2021.
- Deep-water rose shrimp in GSA 1_5_6_7: the biomass is decreasing. Catches should be reduced by at least 41% to conform to precautionary consideration in 2021.
- Red Mullet in GSA 1: the biomass is declining. Catches should not be increased in order to reach F_{MSY} in 2021.
- Striped Red Mullet in GSA 5: the biomass is increasing. Catches may be increased by no more than 61% to reach F_{MSY} in 2021.
- Red Mullet in GSA 6: the biomass is declining. Catches should be reduced by at least 80% to reach F_{MSY} in 2021.
- Red Mullet in GSA 7: the biomass is increasing. Catches should be reduced by at least 21% to reach F_{MSY} in 2021.

- Norway lobster in GSA 5: the biomass is fluctuating. Catches should be reduced by at least 55% to conform to precautionary consideration in 2021.
- Norway lobster in GSA 6: the biomass is increasing. Catches should be reduced by at least 72% to reach F_{MSY} in 2021.
- Hake in GSA 8_9_10_11: the biomass is increasing. Catches should be reduced by at least 54% to reach F_{MSY} in 2021.
- Deep-water rose shrimp in GSA 9_10_11: the biomass is increasing. Catches may be increased by no more than 8% to reach F_{MSY} in 2021.
- Red Mullet in GSA 9: the biomass is increasing. Catches should be reduced by at least 34% to reach F_{MSY} in 2021.
- Red Mullet in GSA 10: the biomass is declining. Catches should be reduced by at least 6% to reach F_{MSY} in 2021.
- Norway lobster in GSA 9: the biomass is stable. Catches should be reduced by at least 6% to reach F_{MSY} in 2021.
- Norway lobster in GSA 11: the biomass is fluctuating. Catches should be reduced by at least 67% to conform to precautionary consideration in 2021.
- Blue and red shrimp in GSA 1: the biomass is declining. Catches should be reduced by at least 73% to reach F_{MSY} in 2021.
- Blue and red shrimp in GSA 5: the biomass is declining. Catches should be reduced by at least 33% to conform to precautionary consideration in 2021.
- Blue and red shrimp in GSA 6_7: the biomass is declining. Catches should be reduced by at least 67% to reach F_{MSY} in 2021.
- Blue and red shrimp in GSA 9_10_11: the biomass is declining. Catches should be reduced by at least 83% to reach F_{MSY} in 2021.
- Giant red shrimp in GSA 9_10_11: the biomass is declining. Catches should be reduced by at least 43% to reach F_{MSY} in 2021.

Table 5.6.2 Summary of advice from EWG 20-09 by area and species. F 2019 is estimated F in the assessment. Change in F is the difference (%) between target F (F_{MSY}) in 2021 and the estimated F for 2019. Change in catch is the difference (%) between catch 2019 and catch 2021. Biomass and catch 2017-2019 are given as an indication of trends over the last 3 years for stocks with time series analytical assessments or biomass indices. Biomass reference points are not available for any of these stocks.

Area (GSA)	Species	Method/ Basis	Age Fbar	Biomass 2017-2019	Catch 2017-2019	F 2019	F 2021	Change in F	Catch 2019*	Catch 2021	Change in catch
1_5_6_7	Hake	a4a	1-3	increasing	stable	1.59	0.39	-75%	3148	721	-77%
1_5_6_7	Deep-water rose shrimp	Index 2020		declining	increasing				1161	681	-41%
1	Red Mullet	a4a	1-3	declining	declining	1.03	0.70	-32%	115	114	0%

5	Striped Red Mullet	a4a	1-2	increasing	declining	0.23	0.44	91%	75	121	61%
6	Red Mullet	a4a	1-3	declining	stable	1.53	0.31	-80%	1546	306	-80%
7	Red Mullet	a4a	1-3	increasing	declining	0.67	0.42	-37%	320	252	-21%
5	Norway lobster	Index 2019		fluctuating	increasing				1407#	638	-55%
6	Norway lobster	a4a	3-6	increasing	declining	0.62	0.11	-82%	245	68	-72%
8_9_10_11	Hake	a4a	1-3	increasing	declining	0.57	0.17	-70%	2075	954	-54%
9_10_11	Deep-water rose shrimp	a4a	1-2	increasing	increasing	1.03	1.09	6%	1606	1741	8%
9	Red Mullet	a4a	1-3	increasing	declining	0.85	0.51	-40%	1011	668	-34%
10	Red Mullet	a4a	1-3	declining	declining	0.48	0.39	-18%	334	314	-6%
9	Norway lobster	a4a	2-6	stable	increasing	0.28	0.28	0%	193	181	-6%
11	Norway lobster	Index 2020		fluctuating	increasing				40	13	-67%
1	Blue and red shrimp	a4a	1-2	declining	declining	1.82	0.29	-84%	120	32	-73%
5	Blue and red shrimp	Index 2020	1-2	declining	increasing				206	137	-33%
6_7	Blue and red shrimp	a4a	1-2	declining	declining	1.30	0.29	-78%	566	188	-67%
9_10_11	Blue and red shrimp	a4a	2-5	declining	stable	1.78	0.33	-81%	366	61	-83%
9_10_11	Giant red shrimp	a4a	1-3	declining	stable	0.73	0.48	-35%	571	323	-43%

*Estimated Catch

Reference value from 2019 advice

STECF considers that for all the 15 age-based assessments presented in the report, the assessments can be used to provide advice on stock status in terms of F relative to F_{MSY},

and to provide catch advice for 2020. STECF notes that the assessments are based on short data series and some degree of uncertainty therefore remains, but STECF considers overall that they provide a robust guidance on the magnitude of changes in F and catches required to reach F_{MSY} by 2021. The 15 age-based assessments form the basis of the advice in section 5 of the EWG 20-09 report. The estimates of F_{low} and F_{MSY} are considered reasonable estimates that can be expected to be precautionary and STECF considers that they can be used directly in the advice. The values of F_{upper} are indicative only - they have not been evaluated as precautionary and should not be used to give catch advice without further evaluation. The EWG 20-09 report also contains values of F and associated catch options for a linear transition in F from 2019 to reach F_{MSY} in 2025 in the short-term forecast table. These are the best estimates of F and catch required in 2021 to follow a linear transition, but they do not take into account uncertainty in estimates or the current progress in transition. They should be considered as guide for current progress towards F_{MSY} in 2025.

STECF notes that for some stocks, particularly hake in GSA 1_5_6&7 and blue and red shrimp in GSA 1 recruitment has declined significantly in recent years, though for other stocks such as red mullet in GSA 7 and deepwater rose shrimp in GSAs 9_10&11 recruitment has increased. STECF notes that in these circumstances the short term forecast advice for catch accounts for these declines or increases by using recent recruitment. STECF notes that if these changes are sustained they may also have implications for management. For example continued decline in recruitment will result in declining SSB and may require greater reduction in catch in order to maintain the stock biomass.

STECF notes that the EWG routinely updates every year the values for $F_{0.1}$ which is used as a proxy for F_{MSY}. STECF considers that this practice should continue, but as information on the stocks improves, where possible the proxy should be replaced by estimates of F_{MSY} to ensure that advice is based on the most up to date information.

For the four stocks with advice based on abundance index, a precautionary buffer of -20% catch reduction was already included in 2018 or 2019 and is not required this year. The advised change in catch is based on the change in stock over the last two years. The catch advice is related to previously advised catches in 2018/2019, and maintains the harvest rate advised for 2019 and 2020. The STECF notes that this approach is consistent with the procedures applied in the North East Atlantic (ICES stocks). For one of these stocks (Norway lobster in GSA 5, Table 5.1.1) catch advice for 2021 was already provided in 2019 and is unchanged (assessments based on abundance index are routinely performed biannually by the STECF EWGs).

STECF notes that F_{MSY} values for red mullet stocks cover a large range (between 0.30 and 0.70) in the different GSAs. These differences come partly from the Fbar range which differs across the stocks, but could also be linked to differences in selection pattern i.e. F at age structure, as well as differences in the growth parameters and natural mortality across the different GSAs. STECF advises that sensitivity analyses could be performed to fully understand the effect of using different growth parameters on the assessment results.

STECF notes that some uncertainties remain, regarding landings of Norway lobster and blue and red shrimp in GSA 11. Although these are not influencing the current advice, they may influence future assessments and advice.

STECF notes that MEDITS biomass indices as well as catches of deep-water rose shrimp in GSA 1_5_6_7 are increasing at different rates in the four respective GSAs. Although the general trend is mostly driven by data from GSAs 5 and 6, this species is showing a

pronounced increase in biomass also in GSAs 7 and 1 in the recent years. STECF notices that exploration of assessment options of smaller stock units might be appropriate for this species in these areas.

STECF notes that data quality deficiencies were comprehensively addressed by the EWG for each stock. STECF observes that biological data deficiencies were not yet entered into the DTMT (Data Transmission Monitoring Tool) by the time of the STECF PLEN 20-03 plenary, but this should occur soon afterwards following updates to the online system. STECF notes that data transmission issues should be addressed by data providers and corrected or explained before the next data submission.

STECF notes that the specific STECF EWG data processing workshop proposed for March 2020, that was cancelled due to covid-19, needs to be rescheduled and hold at a suitable time in 2021, in order to cope with persisting data problems in the western Mediterranean and others areas where stock assessments are required.

STECF conclusions

STECF concludes that the EWG 20-09 addressed all the ToRs appropriately. STECF endorses the assessments and evaluations of stock status produced by the EWG. STECF concludes that the results of the assessments accepted by EWG 20-09 provide reliable information on the status of the stocks and the trends in stock biomass and fishing mortality. In four stocks where assessments have been rejected by the EWG, advice has been provided using survey index trends. These same four stocks were already assessed using survey indices in the previous two years. STECF recommends that the data deficiencies reported by the EWG are addressed, and where possible corrected, before the next data submission.

STECF concludes that in future the EWG should tabulate annual values of the advised catch and F based on $F_{MSY\ Transition}$ and the status of F in the most recent year relative to the $F_{MSY\ Transition}$.

STECF notes that effort data is no longer included within the Med and Black Sea data call and that overall effort estimates are best provided by the FDI EWG. The Commission should advise if the effort tabulation which is currently provided in Section 5 of the Med Assessment EWG report should be discontinued, and the ToRs for effort given only to FDI EWG.

5.2 EWG 20-10 Fisheries Dependent Information (FDI)

Request to STECF

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

Background of the EW 20-10

The STECF EWG 20-10 met virtually during 14 – 18 September 2020. 23 experts attended the meeting (incl. 4 STECF members), representing expertise from 18 countries to review the data transmitted by Member States under the 2020 FDI data call in order to judge whether:

i) data submitted were complete in terms of areas of fishing, types of fleet segment and gear operated and species identified.

ii) data submitted were complete in terms of type of data requested: capacity metrics, effort metrics, landings, unwanted catch and spatially disaggregated landings and effort.

The EWG was also asked to map the data on fishing effort obtained from the call for spatially disaggregated data. In considering the completeness of the data submitted the EWG was entitled to use external sources of data where necessary, as well as expert judgement.

STECF comments

STECF considers that the EWG has addressed all the Terms of Reference. STECF observes the following:

ToR 1. Review and document completeness of the data set and feedback from Member States on approaches used and problems encountered in responding to the data call

1.1. As a matter of priority, the EWG is requested to ensure that all unresolved data transmission (DT) issues encountered prior to and during the EWG meeting are reported on line via the Data Transmission Monitoring Tool (DTMT) available at https://datacollection.jrc.ec.europa.eu/web/dcf/dtmt. Such issues should be reported in full within 2 weeks of the end of the EWG.

STECF acknowledges that the data provided by Member States in response to the 2020 FDI data call, and incorporated into the FDI database, represent the most comprehensive data set currently available on fishery-dependent information from European fleets. However, STECF notes that a small number of shortfalls and gaps remain in the data submitted. The unresolved issues that still require to be addressed by Member States were all recorded in an Excel version of the Data Transmission Monitoring Tool (DTMT), to be submitted subsequently to the online tool that was not in operation at the time of the meeting due to COVID-19 and internet security issues.

1.2. Review outputs of ad hoc contract that provides the catches, landings and discards, at a level of aggregation corresponding to the fleet, area and gear type as specified in each exemption of each discard plan for 2021.

STECF notes that the EWG 20-10 reviewed the methodology and outputs of the *ad hoc* contract (Ref STECF 2076) awarded, as in previous years. This *ad hoc* contract provided data on landings and discards, at a level of aggregation corresponding to the fleet, area and gear type as specified in each anticipated exemption contained in the individual discard plans for 2021. STECF observes that the methodology used in the *ad hoc* contract was appropriate and identical to the one used in previous years.

The main challenge of this exercise is to provide estimates for exemptions for which the Member State did not provide sufficient discards information (no or too few discard samples). In the absence of any appropriate samples at country level, the estimates were derived using extrapolation ('fill-ins') using data from other countries in the same métiers. STECF acknowledges that in these cases where sampling is insufficient the values provided by the *ad hoc* contract still represent the best available estimate.

1.3. Review data quality checks and produce National methodological chapters

STECF observes that data submitted by each Member States were thoroughly reviewed. The review included the methodology used for responding to the data call and the coverage, quality and consistency of data submitted. The review sections by Member State are reproduced in Annex 1 of the EWG 20-10 Report.

STECF notes that Member States are responsible for providing checked and validated data. Given the complexity, size, and high level of disaggregation of the datasets submitted, some erroneous records are though still expected to occur occasionally, in spite of the extensive automated checks already implemented by the JRC.

STECF notes that transferring biological sampled data (based on national sampling protocol) into the very detailed Table A that would include catches at length is of major concern for all Member States as there is no uniformly defined method to do so. Progresses towards achieving such a unified methodology have been ongoing since the major renewal of the FDI data call in 2017, but some more work is still needed to ensure full agreement and adoption by all Member States.

ToR 2. Provide landings and discards data for exemptions in discard plans

2.1. STECF is asked to provide figures for landings and discards in 2019, at a level of aggregation corresponding to the fleet, area and gear type as specified in each exemption of each of the discard plans for 2021. Where there is insufficient discard data for the above task, the STECF is asked to provide estimated catches (landings + discards) for 2019, if possible and enough data provided during data call.

STECF acknowledges that EWG 20-10 attempted to provide discard estimates for each anticipated exemption for 2021. However, some exemptions required detailed information currently not available in the FDI database (i.e. distance fished from shore and vessels engine power). Based on the feasibility of the EWG to extract the relevant data, exemptions were characterised in three groups: "yes" (data were extracted), "partially" (data were partially extracted) or "no" (no data was extracted).

STECF agrees that a specific data request asking Member States to provide data relating to the vessels to which a proposed exemption is likely to apply, is a better option than using data provided to populate the FDI database. This is discussed in ToR 7.2 of this PLEN 20-03 report.

STECF observes that EWG 20-10 provided the discard information for each exemption in 2 separate formats: with and without fill-ins. In addition, the information was summarised in two types of tables: tables with landings and discards reported by MS and estimated for the fleets under exemptions (Tables

1-8 in Annex 2) and tables with FDI data reported and filled in aggregated by species and sub regions (Tables 9-13 in Annex 2).

STECF further observes that the main shortcoming to provide precise estimates lies on the fact that data from MS sampling programs were not always sufficient to provide discard estimates. This is mainly because observer programs undertaken under DCF national sampling programs are not designed to specifically sample fisheries with exemptions in place.

The STECF notes that the Member States (MS) sometimes uses different sources of discard information (scientific data, logbooks or a combination of the two) when reporting to FDI data call. Direct comparisons between Member States may therefore not only reflect a difference in actual discard levels, but also differences in methodology.

STECF notes that considering the shortcomings listed above, the resulting estimates should be interpreted with caution.

2.2. STECF is asked to assess and if possible, provide percentages of discards estimates below and above MCRS at a level of aggregation corresponding to the fleet, area and gear type as specified in each exemption of each of the discard plans for 2021.

STECF observes that proportions of discards above and below MCRS, in weight and number by species, were estimated. The information was calculated at the level of aggregation corresponding to the country, year, area, and metier and is presented in the form of tables and graphs in the Annex 3 of the EWG 20-10 Report.

STECF notes that estimates were calculated by merging Tables A (detailed catch table), D (discards length data) and F (landings length data) using the fields *domain_discards* and *domain_landings*. The variable *domains* were created to reflect the sampling programs of each country and to provide the best scientific estimates of the length structure of the landings/discards. Following the proposal of EWG 19-11 and the suggestion of STECF PLEN 19-03, the information on mean weight-at-length was requested from Member States for the first time in the FDI 2020 data call. It was used to calculate the discards in weight above and below MCRS.

ToR 3. Produce dissemination tables and maps of spatial effort and landings by c-squares

3.1. Discuss and agree the format of the biological data (FDI Tables C, D, E and F) and of the refusal rate data to be publicly disseminated (FDI Table B).

STECF notes that it will still be necessary to develop an agreed standard methodology for combining the biological parameters in Tables C, D, E and F with Table A. Data will be checked for compliance with the confidentiality agreements before the estimates of the age and length composition of catches can be made publicly available.

STECF agrees that once this method is agreed and applied, the following outputs could be made public:

- Relative length distribution by year, quarter, species, area and métier. Separately for landings and discards.
- Relative age distribution by year, quarter, species, area, métier. Separately for landings and discards

STECF notes that 2020 data will be disseminated in the same format as agreed in 2019, without the need to formally notify to the Member States prior dissemination of data.

3.2. If GIS technical skills are available in the EWG, produce maps of effort and landings by c-square (to be inserted in the EWG report) for the following regions (as defined in COM-2016-134 for areas other than 'distant waters') and major gear types (as defined in appendix 4 of the data call):

a) Baltic; North Sea; North Western Waters; South Western Waters; Mediterranean and Black Sea; Distant waters[3]

b) Trawls (except beam trawls) with mesh < 100mm; trawls (except beam trawls) with mesh ≥ 100mm; beam trawls with mesh < 120mm; beam trawls with mesh ≥120mm; seine nets; gillnets and entangling nets; dredges; hooks and lines; surrounding nets; pots and traps.

STECF notes that a comprehensive set of maps of spatial effort and landings were produced for all fishing regions and major gear types. They were included in Annex 4 of the EWG Report and are available at the EU level for public access in the STECF web: https://stecf.jrc.ec.europa.eu/dd/fdi.

STECF observes that the geographical data validation process adopted last year was implemented and documented in a series of scripts. STECF agrees that these checks should be included in the FDI data call uploading tool.

STECF notes that quality of the spatial data provided by Member States has improved compared to previous years. The rate of invalid records was considered low (< 1.5 %).

EWG-20-10 proposal for actions in 2021

STECF observes that the EWG 20-10 proposes the following actions in 2021 to achieve the objectives of the ToRs:

1) A data dissemination *ad hoc* contract that would come up with a common methodology proposal to merge Table A with biological data Tables (C, D, E and F) and propose appropriate methods to disseminate biological data and quality of estimates.
2) The dissemination *ad hoc* contract will be followed by a first EWG meeting dedicated to Methodological issues (e.g. processes and methods to assemble the detailed table A) to further improve data quality and utility and to ensure appropriate dissemination of the FDI data. The EWG meeting would also be used to compile and check the MS data submitted through the FDI data call.

3) A second, EWG-FDI meeting to provide any advice dependent on FDI data and requested by the Commission, especially if the quantification of exemptions under the landing obligation will continue to be performed with FDI data.

EWG 20-10 data call

STECF observes that the biological data from the Mediterranean- and Black Sea were not requested in the 2020 FDI data call, on the basis that they are collected under the dedicated Mediterranean- and Black Sea data call. To start building consistent time series and publish it, STECF suggests that the biological data provided during the Mediterranean- and Black Sea data call is incorporated into the FDI database.

STECF notes that there is a need to have as long a time series of FDI data as possible. A progressive (one year at the time) backward extension with historical data (prior to 2015) was the approach preferred by Member States to achieve this time series. Member States considered that assembling and formatting historical data is time-consuming, and it is considered difficult to process several years at once.

STECF conclusions

STECF concludes that the EWG 20-10 addressed all ToRs appropriately.

STECF conclusions for ToR 1 and ToR 2

STECF reiterates that the *ad hoc* contract that provides the catches, landings and discards, at a level of aggregation corresponding to the fleet, area and gear type as specified in each exemption of each discard plan for the following year has proven its usefulness over the years and if possible, should be repeated in 2021.

STECF concludes that the methodology used to estimate discards is appropriate. However, for some cases, the low level of sampling or the absence of samples, can lead to imprecise estimates or estimates potentially not fully representative of the true (but unknown) level of discarding for the relevant fleets.

STECF concludes that the methodology used to calculate the percentages below and above MCRS of landings and discards is appropriate and useful to inform on trends in size composition in the context of the landing obligation. The inclusion of the variable MEAN_WEIGHT_AT_LENGTH in Tables D and F (discards and landings by length, respectively) has increased the precision of the estimates.

To ensure the quality of the data and to continue building standard procedures to maintain the FDI database, STECF reiterates its conclusion from previous years that two separate Expert Working group meetings would be needed in 2021. The first Working Group, Methodology FDI EWG, would be solely dedicated to compiling and checking the data submitted through the FDI data call and address the methodological discussions needed to improve comparability of the data submitted by MS. This working group could meet just after the deadline of the data call in July if the data call can be launched as previously in early June. A second, Advice FDI EWG meeting would meet around the same time as previously (mid September) and respond to any requests from the Commission dependent on FDI data, including the quantification of exemptions under the landing obligation if still required. This second EWG could also focus on the comparison of the data with the economic data call as required for the Annual Economic Report.

If only one EWG meeting is possible in 2021, STECF proposes that processes and methods to assemble the detailed Table A from the Member States' sample data be thoroughly investigated through a dedicated contract ahead of the 2021 FDI data call. This would leave enough time during the EWG meeting to address the other requests.

STECF conclusions for ToR 3

STECF concludes that dissemination of EWG outputs in form of sets of capacity, catches and effort tables and maps of EU fleets landings and effort is of generic interest both within and outside STECF requirements, as discussed in PLEN 19-03, and is to be encouraged.

For the appropriate dissemination of FDI data, ensuring the quality of the information and preserving the data confidentiality, STECF supports the proposal of the EWG to issue a data dissemination *ad hoc* contract in 2021. This dissemination contract will be focused on merging Table A with biological data Tables (C, D, E and F) and proposing dissemination methods.

STECF conclusions for data call

To populate the FDI database with the biological data from the Mediterranean- and Black Sea, STECF suggests that DG MARE sends a letter to the Member States requesting authorisation to transfer data from the Med BS database to the FDI database at JRC using transfer protocol to be agreed (the protocol could also be agreed and defined during the methodology EWG meeting). If this is not possible, Member States could be asked directly to submit the biological data from the Mediterranean- and Black Sea under the FDI data call.

STECF agrees with the suggestion of EWG 20-10 to request historical data backwards one year at the time. In 2021, the data call will thus request data for both 2014 and 2020.

5.3 EWG 20-11: Balance / Capacity

Request to the STECF

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

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

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

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

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

a) Number of overfished stocks (NOS)

b) Economic dependency indicator (EDI)

c) Number of stocks at risk (NSR)

d) Restricted Sustainable harvest indicator (SHIR)

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

STECF response

STECF comments

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

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

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

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

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

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

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

Q2: Advise for each Member State whether the annual national fleet report and, where relevant, action plan submitted by 31 May 2020 present an appropriate and complete analysis of balance between fleet capacity and fishing opportunity of all EU fleet segments, based on DCF information and in line with the Commission guidelines COM(2014)545. In the absence of an appropriate or complete analysis or where discrepancies between the national calculations and those carried out by STECF Expert Working group 20-11 are found, STECF is requested to identify the reasons and recommend how to remedy this situation for the upcoming reporting year.

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

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

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

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

The action plans submitted by Member States were generally not sufficiently detailed regarding the precise measures to be implemented or their objectives and targets for reducing the perceived imbalance in the fleet segments concerned. STECF considers that Member States' action plans should, at a minimum, contain the following information:

i. a clear statement on which fleet segments are considered to be imbalanced and why;

ii. specific objectives of the action plan, i.e. that relate to those fleet segments that are identified as being imbalanced and/or the fish stocks on which those segments are reliant;

iii. targets that are:

(a) quantifiable,

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

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

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

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

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

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

STECF notes that the indicators from the outermost regions are in general scarce and the available time series is too short to provide any trend on the evolution of these indicators. For Portuguese and Spanish outermost regions, economic data are available for recent years, although trends cannot be obtained. For French outermost regions there is lack of such data. In general, biological indicators could not be computed due to the general absence of stock assessment and/or catch data and by fleet segment. Technical indicators

suffer from the same problem as other small-scale segments, i.e., when the VUR indicator is absent, the use of VUR220 is inadequate for these types of fisheries.

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

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

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

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

- The Number of Overfished Stocks indicator (NOS) is not robust to segments catching many different species and it requires the definition of a natural threshold, therefore more work is required for the interpretation of this indicator.
- The Economic Dependency Indicator (EDI) has the advantages of i) being robust in time if the segment aggregation remains constant and ii) that it can be computed readily with the data available each year. It complements the information provided by the Sustainable Harvest Indicator (SHI) and the Stocks AT Risk indicator (SAR). The added value of the EDI is that it highlights those fleet segments which are relying most heavily on overfished stocks and that therefore, it provides an indication of where action might be needed.
- The Number of Stocks at Risk indicator (NSR) requires a B_{lim} estimation, which implies that the number of segments for which this indicator can be computed is limited. Therefore, while it can complement the SAR indicator, it cannot replace it unless a proxy for this B_{lim} is found such as the use of 50% x B_{MSY} .
- The restricted Sustainable Harvest indicator (SHIr) has the advantage of no compensation between positive and negative values compared to SHI and therefore it helps on the interpretation. However, it shares the same pros and cons as the SHI without adding new information.

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

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

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

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

STECF notes that the proposed new indicator NSR is of limited value as it can only be computed for fleet segments that exploit stocks assessed to be below $B_{lim,}$ but Blim and is currently computed for only a limited number of stocks, mainly in the northeast Atlantic area. It would be more informative to modify the criteria currently specified in the Commission guidelines to identify stocks at risk and compute two categories of the SAR indicator; i) a SAR based on using criterion (a) only and ii) a SAR based on criteria b, c and d2.

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

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

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

STECF notes that the added value of using FDI data comes from the inclusion of discards in the catch data and the finer geographical reference which can help on linking species' landings with stocks and therefore, help on the biological indicators calculation.

STECF conclusions

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

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

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2 a) assessed as being below the B_{lim};

b) subject to an advice to close the fishery, to prohibit directed fisheries, to reduce the fishery to the lowest possible level, or similar advice from an international advisory body, even where such advice is given on a data limited basis;

c) subject to a fishing opportunities regulation which stipulates that the fish should be returned to the sea unharmed or that landings are prohibited;

d) a stock which is on the IUCN 'red list' or is listed by CITES.

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

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

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

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

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

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

1) Include the two proposed indicators in the guidelines in case DG Mare decides to issue new guidelines for 2022. Then Member States would be required to calculate the indicators. STECF underlines that these new indicators are potentially helpful for Member States to manage their fleets and not simply to provide more indicator values to judge if fleets are in or out of balance.
2) STECF calculates those indicators (as already done to a certain extent by the annual EWG) and Member States are able to apply those indicators internally to manage their fleets. It would still give DG Mare more insight into the fleet segments which need to be addressed to reduce the number of fleet segments out of balance.

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

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

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

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

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

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

5.4 EWG 20-14 The social dimension of the CFP

Request to STECF

The STECF is requested to:

1. review the report of the STECF Expert Working Group 20-14, evaluate the findings and assess the delivery by the STECF Expert Working Group on the terms of reference and make any appropriate comments and recommendations with a view to enhancing STECF support to the social dimension of fisheries.
2. provide recommendations on the next actions to be taken to achieve a sound methodology for the analysis of social data allowing for the development of a time-series and trends and the use of social data in assessing the social impact of the Common Fisheries Policy as well as of envisaged fisheries measures. This in coherence with the work of other STECF activities, in particular in the economic area.
3. pay a particular attention to the possibility of including in such methodology national and community profiles, duly taking into account already existing sources and ongoing initiatives, for instance those by the ICES working group on social indicators.

Background

Fisheries throughout Europe have undergone major structural changes, leading to important social consequences for both individual fishers as for fishing communities. In several fishing communities and regions of the EU, the social importance of the fisheries sector outweighs its direct economic contribution. There is an increasing awareness that more attention should be paid to the social dimension of fisheries, emphasised by the mission letter of Commissioner Sinkevičius explicitly mentioning the need to address the social dimension[3].

The collection of social indicators for the EU fishing fleet, aquaculture- and fish processing industry was introduced by Regulation (EU) No 2017/1004 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the CFP (EU-MAP). The social variables, to be collected every three years from 2018 onwards, are: Employment by gender; Full Time Employment (FTE) by gender; Unpaid labour by gender; Employment by age; Employment by education level; Employment by nationality; Employment by employment status; Total FTE National.

STECF Expert Working Group (EWG) 19-03 reviewed the social data in the EU fisheries sector collected under the Data Collection Framework (DCF / EU-MAP) in 2018, provided an EU level overview and national chapters describing the data, and discussed potential improvements and refinements in the collection of social data in EU fisheries. The EWG 19-03 report provided a comprehensive overview of the social data collected under the EU MAP for the EU fishing sector on the social and demographic characteristics of the labour force both at EU and Member States level over the year 2017.

3 https://ec.europa.eu/commission/commissioners/sites/comm-cwt2019/files/commissioner_mission_letters/mission-letter-sinkevicius-2019-2024_en.pdf

STECF observations

STECF Expert Working Group (EWG) 20-14 was tasked with building upon the findings of EWG 19-03. The EWG was requested to further develop the methodologies for the collection and analysis of social data in fisheries, to be applied for the collection of social data for the data call 2021 and the subsequent analysis and use of these data. Additionally, the EWG was tasked with assessing the impact of the Common Fisheries Policy Regulation and the implementation of its Articles 5.2 (access to waters) and 16 and 17 (fishing opportunities) of Regulation (EU) No 1380/2013 on the social situation of small-scale coastal fishers and their communities.

The EWG 20-14 held a virtual meeting, from the 28th of September until the 2nd of October 2020. The meeting was attended by 17 invited experts, 3 members of STECF, 1 expert from JRC, 1 member of the European Commission DGMARE and three observers.

Scope of the work

STECF notes that the TOR for the work of EWG 20-14 consists of two parts. The first part reflected by TORs 1-3, calls for an analysis of impact of the effects on society of policy implementation. The second part of the TOR, as reflected by TOR 4 and 5 of the EWG, is more closely related to the work implemented by EWG 19-03 and has a focus on further methodological development.

STECF notes that this divide in the TORs, between assessment and methodology development, is also reflected in the EWG report. Two separate groups worked on the different parts of the TOR. Especially feedback between implementation of TORs 1-3 and 4-5, given time restrictions was therefore suboptimal.

In order to facilitate the work of the EWG 20-14 the Commission had prior to the meeting issued a voluntary questionnaire to the MS which addressed (i) the use of transparent and objective criteria including those of an environmental, social and economic nature in allocating the fishing opportunities available to them, (ii) the actual criteria used in the allocation of fisheries and the methodology applied to underpin these criteria, (iii) the efforts undertaken within the allocation system to provide incentives to fishing vessels deploying selective fishing gear or using fishing techniques with reduced environmental impact and (iv) whether impact/effectiveness studies were carried out for the national allocation system.

STECF acknowledges that 16 MS replied to the questionnaire but observes that the completeness of reply varies. The EWG was though able to rely on the additional knowledge and preparatory work of the experts present to produce information on, for example, the national system of allocating fishing opportunities, the division of fishing opportunities between the SSCF and LSF and developments of these over time. During the meeting, experts performed additional analyses of EU regulations, especially TAC and quota regulations, additional literature review and expert knowledge were also used for the analysis.

STECF observes, from implementation of the assessments under TORs 1-3, that it is apparent that, generally, for the assessment of the social impact of fisheries management measures there is a lack of quantitative and qualitative data available. To implement the assessment, the information obtained to a large extend depended on the input of the available experts.

Additionally, STECF observes that for those instances where quantitative and qualitative data was available, there is a clear need of having a national expert available to interpret and assess the data in the national and local context.

STECF notes that if the suggestions for National and Community profiling of the fishing sector, as recommended under TORs 4 and 5, would be operationalised, this would indeed allow for more data and information to become available to implement assessments of the social impacts of fisheries management measures.

Findings

Effects of policy implementation (TOR 1-3)

Concerning the analysis of (i) the impact of restrictions put in place by Member States under Article 5.2 of Regulation (EU) No 1380/2013, STECF notes that the EWG found no MS reported any conflicts regarding the special rule to allow vessels traditionally fishing in the area in the territorial waters (6-12 nm) that is foreseen in Art. 5.2. However, the EWG also noted that it was not possible to determine whether privileged access to coastal waters (i.e. access limited to vessels of the small-scale segments/coastal fisheries, e.g. Plaice Box in the North Sea) has an effect on the (economic) development of specific fleet segments. Assessing this would require to compare the current situation with a situation without such a restriction. After more than 20 years of e.g. the Plaice box, the sector has adapted to this situation, and such comparison data do not exist. It might be possible, however, to compare via simulation the current situation with a situation where the restriction of the Plaice Box would be removed.

Concerning the analysis of Art. 17 how social criteria and criteria based upon the contribution to the local economy have been used by MS when allocating the fishing opportunities available to them, STECF notes that the EWG found many examples of Member States using social criteria in the allocation of fishing opportunities. However, there does not appear to be any clear trend in the use of social criteria based on geography, type of fishing opportunity, or political culture. It is also clear that not two MS use the same system of allocating fishing opportunities or even the same mix of social criteria.

Concerning the analysis of the impact of the national fishing opportunities allocation system on the social sustainability of the national fishing sector, and in particular of small-scale coastal fishers and their communities, STECF notes that the EWG found that the information provided by the MS combined with the knowledge of the available experts was useful for the initial analysis. However, the EWG noted that there is a potential difference between the fishing opportunity allocation criteria used, the actual quota allocation and the possibilities for fleets to effectively fish the quota. National and Community profiles of the fisheries sector could assist over time in more clearly analysing the utilisation and impacts of these allocation criteria.

STECF notes that the TORs 1-3 stipulated an analysis of impact of measures and practices in general, with a specific focus on the effects on the SSCF segment. Especially the allocation of fishing opportunities and the distribution of fishing rights between SSCF and LSF in the Member States, and whether rights move from small- to large-scale vessels, needed to be analysed.

STECF observes that although MS may not directly draw a direct line between Art. 17 of the basic regulation and their national quota allocation systems, they do use or have used criteria in the allocation process which could be labelled as 'social criteria' (e.g. a special fisheries fund in Denmark for SSCF as percentage of the overall quota). Some of the criteria were already applied before the introduction of Art. 17, like historical track record of catches, that may not be associated directly with social aspects when implemented, but STECF observes is *de facto* such a criterion, with potentially positive or negative effects on different fleet segments.

STECF observes that to analyse the impact of the system of allocation of fishing opportunities it is important that the entire system of fishing opportunities is taken into consideration. For example, STECF notes that in analysing allocation of quota (as a means of fishing opportunity allocation) between the SSCF and the LSF the allocation should be analysed in combination with access to other resources that might be available for small scale fleets, (e.g. non-quota species and access rights to specific fishing grounds). Also, the definition of small scale fleets might be different from the general EU definition for quota allocation purposes and might be misleading when compared between countries, (e.g. in the STECF AER the small scale fleet is defined as vessels <12 using passive gears, while for quota distribution the 10m threshold is used by some MS).

Additionally, STECF notes that traditionally in the analysis of differences between impacts of e.g. quota allocation schemes on the SSCF and the LSF, the importance of the SSCF is mainly defined in terms of the social dimension as being an important contributor to the local community. Yet also from an economic perspective the SSCF shows a twice as high productivity in terms of use of capital and labour compared to the LSF (as shown in the STECF AER report 20-06). This implies that the SSCF's use of the production factors (capital and labour) is more efficient, derived probably from shorter value chains and a larger focus on quality, while taking advantage of high-value non-TAC species.

Hence STECF notes that, to analyse impacts of measures, the effects should be considered taking the relevant parts of the whole socio-ecological fisheries system into consideration. Additionally, there should be a realisation that systems vary widely between MS. To support the analysis within and between countries, STECF notes that it is important to provide clear and consistent definitions of terms and concepts used. One of the challenges lies in the operationalisation of the concepts of reliance and resilience, two key concepts to measure (long term) impacts of policy on fishing communities, as defined by EWG 19-03 and ICES WGSOCIAL. Progresses pursued by ICES WGSOCIAL for devising a universal definition for these concepts, while providing an appropriate methodology to operationalise and quantify these concepts in the national context, may allow for operational indicators of social impact comparable between MS to be defined and may be used by future STECF EWGs on social data.

Methodological development for data collection and analysis of social data (TOR 4-5)

STECF notes that in order to facilitate the collection of social data, as part of the 2021 data call, there is a need to clarify variables at an early stage in 2021 before MS begin to collect and report the next set of social variables. Next to using similar age brackets across for example the Social data report, the AER and those used by Eurostat, there is the need for PGECON to devise clear operational definitions for issues such as paid vs unpaid labour and the category 'other income'. Specifically, related to the latter, STECF observes it is important to consider that next to having a focus on the fishing operation, hence a focus on the vessel owner, his/her enterprise and his/her family circumstances, there is also a necessity to consider the circumstances of, for example, crew members but also other (family) members relying on the fishing operation.

The EWG advises thus that any new variable to collect should be defined together with the DCF Planning Group on Economics Issues (PGECON), using information also from the ICES Working Group on Social indicators (WGSOCIAL). STECF endorses the suggestion to define these variables, or make significant changes to the definition of existing variables, to be discussed and agreed at the social variable subgroup of PGECON planned early in 2021 (a date is not decided yet). This group should involve social scientists as well as data collectors and/or end users.

Concerning the development of methodologies for the expansion of the social analysis to include national profiles and specific fishing community social profiles, STECF notes that

the EWG developed a detailed template for the national profiles with a comprehensive list of descriptors, and an outline of potential data sources, the majority of which are available at sources such as Eurostat, DCF, Eurofound. As for the Community profiles, which is a much more detailed, and hence labour intensive, undertaking than the compiling of national profiles, the EWG report provides guidance to MS who wish to conduct community profiles. STECF observes the guidelines attempt to ensure that community profiling initiatives across Europe address some common issues and questions without being overly prescriptive.

STECF observes that the further detailing of National Profiles and Community Profiles has been appropriate and has progressed in defining a methodology and format apt for implementation by the MS. The National Profiles are understood to depict the national structure of the fishing fleet(s), including social, cultural and economic aspects of the fisheries and witnessed trends, developments and (social) issues. STECF agrees that the National profile should be updated once every three years to have value. STECF notes that the National Profiles should be developed in conjunction with data collected under the DCF and as, for example, reported in the AER. However, STECF notes that the social profile can provide a more profound description and analysis of, for example, the national fishing opportunity allocation system.

STECF observes that the proposed Community Profiles, to be collected once every 5 years for selected communities, are a necessary addition to the National Profiles. They will generate data to analyse a more long term and more profound impact of measures on the fishing communities. STECF notes that the proposed methodology by the EWG for the construction of such Community Profiles is appropriate.

STECF conclusions

STECF concludes for TOR 1 that the EWG answered the TORs and acknowledges that the analysis produced is of a high standard.

STECF concludes that the discussions and the proposals of the EWG 20-14 should be considered by the Commission and MS when revising the EU-MAP and developing the social indicators for the 2021-2022 period.

In response to TOR 2 and TOR 3 STECF concludes that for the next period three main activities need to be addressed:

(i) Unification of concepts, definitions and variables
(ii) Development of National Profiles
(iii) Development of Community Profiles

STECF concludes that the report provides a detailed description and methodology to enable the construction of both National and Community profiles. To further this development, STECF concludes that there is a necessity to produce clear and unified definitions of concepts, definitions and variables used. This unification should be achieved across all bodies currently involved in the development of social indicators such as STECF, PGECON and ICES WGSOCIAL. In order to do so it is proposed to convene a meeting of the Social variables sub-group of PGECON in early 2021. The meeting should be held as early as possible so as to provide clear guidance to MS before they begin their 2021 social data collection. Meeting attendees should include representatives of PGECON, STECF and ICES WGSOCIAL and should involve social scientists as well as data collectors and/or end users. The group should be tasked with defining concepts and variables following the recommendations of STECF EWG 19-03, 20-14 and relevant PGECON meetings.

STECF concludes that to be able to properly analyse and advise on impacts of fisheries management measures these National and Community profiles are a necessity. As proven by EWG 20-14, describing and analysing the effects of, for example, the impact of an

allocation system of fishing opportunities, between the SSCF and LSF requires this information. Nevertheless, in parallel with the analysis of the AER, the analysis of social indicators will always require national expertise for a proper contextual analysis.

As for the development of National Profiles, it is anticipated that the National Profiles should be ready to be used in the next round of social data analysis in 2022. EWG 20-14 has already provided the outline of such National Profiles. To facilitate this process the following steps are suggested:

(i) Several experts will be tasked with preparing example national profiles for selected countries. An ad hoc contract may be useful in ensuring that this task is done in a coherent and timely manner.

(ii) In 2021 a dedicated EWG of STECF should be convened. This EWG should:
   a. Assess whether the example National profiles result in usable data and information. If required, the EWG may suggest necessary changes to the National Profile format.
   b. Assess possible discrepancies and comparability of the National Profiles across MS.
   c. Assess the extent to which the data produced are fit for purpose of analysing social impacts of fisheries management measures.
   d. Advise on further actions to be taken. Such as on the role of required experts in populating the National Profiles and analysing the outcome.
   e. By using the example National Profiles, further develop indicators for Reliance and Resilience, as suggested by EWG 19-03.

(iii) Based on the outcome of the EWG the final format for the National Profiles will be established and should be used as far as possible by the MS already in the upcoming Data Collection process.

As for the development of the Community Profiles, this development will follow the process of establishing and populating the National Profiles in 2022. Based on the experiences during 2021 and 2022 of working with the National Profiles the methodology as suggested by EWG 20-14 will be further developed.

The Community Profiles can be perceived as further detailing the analysis for each sea basin indicating the common strengths and weaknesses of the sea basin regarding the objectives of the CFP which are currently developed under the EMFF. It is suggested for the 2022-2023 period to test the implementation of Community Profiles, in line with EWG 20-14 recommendations, in several pilots possibly in partnership with Fisheries Local Action Groups (FLAGs).

5.5 EWG 20-02 Review of the Technical Measures Regulation

Request to STECF

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

In this revision, STECF is requested to incorporate the latest ICES advice on innovative gears.

EWG 20-02 - Terms of reference

1. *Evaluate the performance of technical measures to conserve fishery resources and protect marine ecosystems according to Article 31 of Technical Measures Regulation (TMR) (EU) 1241/2019.*
2. *Evaluate the extent to which technical measures both at regional level and at Union level have contributed to achieving the objectives set out in Article 3 of said Regulation and reaching the targets set out in Article 4, including progress that has been made or impact arising from innovative gear.*
3. *Advise on the most appropriate selectivity performance indicator for comparative evaluation of fishing gears according to Article 16 of Regulation 1241/2019. In preparing its advice, STECF may inter alia consider the use of the length of optimal selectivity Lopt compared to the average length of fish caught. Where possible, EWG 20-02 should calculate time-series of the appropriate selectivity indicator for each of the main commercial fish stocks and areas, considering those included in Annex XIV of the TMR.*
4. *Assess the progress made or impact of innovative gear and evaluate the use of innovative gears, drawing conclusions about the benefits for, or negative effects on, marine ecosystems, sensitive habitats and selectivity based on the most recent advice from ICES and other relevant scientific organizations.*
5. *Report on the best available estimates of sensitive species (incl. seabirds, sharks, turtles, cetaceans) disaggregated by species, fishery and Member State in relation to the conservation status of each species with an assessment whether by-catch rates are changing over time and to identify problematic fisheries that may require specific attention.*
6. *Report on data on impacts of fisheries on habitats and ecosystems that help to identify areas where further efforts are needed to address adverse impacts on the sensitive habitats including vulnerable marine ecosystems (VMEs)*

EWG 20-02 should have regard to advice from ICES and GFCM and should draw conclusions about the benefits achieved for, or negative effects on, marine ecosystems, sensitive habitats and selectivity. Specific attention should be paid to areas where, at regional level, there is evidence that the objectives and targets as set out in Articles 3 and 4 of Regulation (EU) 1241/2019 have not been met.

The evaluation shall cover the period from 1 January 2014 and shall cover, to the extent possible, fisheries by EU fishing vessels in all the fishing zones defined in Article 5 of Regulation 1241/2004 (North Sea, Baltic Sea, north western waters, south western waters,

the Mediterranean Sea east of 5°36'W, the Black Sea, the NEAFC regulatory area and Union waters in the Indian Ocean and the West Atlantic.

STECF observations

Two in-person, week-long EWG meetings to evaluate the TMR were originally planned for the beginning and mid of 2020. However, due to the COVID-19 pandemic, only one virtual meeting was convened during the week 5-9 October 2020.

The STECF commends the work undertaken by the EWG 20-02 in attempting to address extremely demanding terms of reference under difficult circumstances and with limited data and resources.

ToR 1-3 Selectivity performance indicator & assessing the impact of technical measures

Background – a brief overview of prior developments

Since 2012, STECF has considered a range of indicators for monitoring changes in selectivity and exploitation patterns during several STECF experts working groups (EWG 12-20, EWG 13-04, EWG 15-05 and EWG 17-02). This was in the context of the development of the Commission's proposal for a new technical measures framework and for monitoring and reporting on the Landing Obligation (EWG 13-23 and EWG 16-13). From the very beginning, the weakness of catch-based metrics was identified (due to their sensitivity to population structure) and 'pilot' indicators discussed were typically F-based (e.g. $F_{immatures}/F_{matures}$ in STECF 12-20, STECF 13-04; Age at which F is 50% of maximum F-at-age in STECF 15-05).

Subsequently, the 2016 Commission's proposal for a new technical measures regulation introduced the concept of quantitative targets in line with CFP objectives as essential elements to support the implementation of technical measures. Accordingly, STECF 18-15 tackled the issue of selectivity indicators in a more systematic way by comparing a range of different catch-based, length-based and F-based indicators using both simulated and empirical data. Among other observations, this work illustrated that F-based indicators were the most informative of those investigated. The work within STECF 18-15 was later extended into a scientific publication (Vasilakopoulos et al. 2020), which identified the ratio F_{rec}/F_{bar}, the ratio of the F of the first recruited age–class to the mean F of the fully exploited age classes, as being the most suitable selectivity indicator among those tested. In particular, it has the major advantage that unlike the other approaches tested in the publication, it can track selectivity changes, without being overly sensitive to changes in recruitment or changes in overall fishing pressure.

In addition, STECF PLEN 18-01 looked at the use of the length of optimal selectivity (Lopt) as a reference point against which to measure the impact technical measures have on the exploitation pattern of commercially exploited stocks. STECF underlined that improving this exploitation pattern is key to reduce the impact of fishing on the stock's biomass, and thus contributing to the objective of minimising the impact of fishing on marine ecosystems.

At the summer 2020 plenary meeting of the STECF (STECF PLEN 20-02), it was agreed that the EWG to evaluate the TMR would build on the work on age-based selectivity indicators initiated by STECF EWG 18-15 and further developed by Vasilakopoulos et al. (2020) and would also consider Lopt, building on work by ICES WKLIFE and others. Furthermore, because the number of EWGs was reduced from 2 to 1 and because of the need to seek further clarification from DG MARE on what would be required of the STECF and its EWG, further discussions were held throughout July within a group comprising participants from DG MARE, STECF Board, the EWG co-chairs and the JRC focal point. Part

of this group's tasks was to issue the data request to ICES, to obtain time series of F-at-age per stock and fisheries in digital format.

STECF comments on ToR 1-3

The EWG was requested to evaluate the performance of technical measures according to Article 31 of Technical Measures Regulation (TMR) (EU) 1241/2019 (Item 1 of the ToRs) and the extent to which technical measures both at regional level and at Union level have contributed to achieving the objectives set out in Article 3 of said Regulation and reaching the targets set out in Article 4, including progress that has been made or impact arising from innovative gear (Item 2 of the ToRs). STECF notes that given that the TMR 2019/1241 has only been in place for one year, it is too soon to be able to evaluate (backward) any aspect of its performance with regard to achieving their stated objectives and targets. The evaluation task comprised, thus, ex-post investigation of the impact that previous technical measures have had on the stated objectives and targets.

The EWG 20-02 was also requested to advise on the most appropriate selectivity performance indicator for comparative evaluation of fishing gears according to Article 16 of Regulation 1241/2019 and where possible, calculate time-series of the appropriate selectivity indicator for each of the main commercial fish stocks and areas, considering those included in Annex XIV of the TMR (Item 3 of the ToRs).

In an attempt to address item 3 of the terms of reference as far as practically possible, time-series of the selectivity indicators for the main commercial fish stocks and areas were calculated using the method described in Vasilakopoulos et al (2020). STECF agrees that given the available data and resources and in the context of the advice provided by the STECF PLEN 20-02 and discussions between the STECF and DG MARE, such an approach was appropriate. Nevertheless, the approach did not allow the terms of reference to be addressed in their entirety, especially items 1 and 2. Additionally, although many technical measures relate to specific gears and/or fisheries, no fishery- or gear-specific evaluations were undertaken for stocks in different regions. Hence, the results presented in the EWG 20-02 report provide an overview of temporal trends in relative selectivity for the recruiting year-classes at the population level only.

In addition, the EWG raised concerns that the Vasilakopoulos et al (2020) approach is sensitive to estimates of F at age from stock assessments which can be rather uncertain. STECF agrees with the Expert group remark that F-at-age is often estimated with large uncertainty, particularly on the youngest ages, thereby making the F_{rec}/F_{bar} indicator also uncertain. In addition, the choice of stock assessment model and the associated assumptions about selectivity will influence the resulting F-at-age from the assessment.

Other management measures may also affect the quality and reliability of the catch data which are fundamental to stock assessments and the resulting estimates of F-at-age, and especially F_{rec}. In particular, the introduction of the landing obligation may have changed the willingness of the fishery to permit observers on board to collect catch samples which may lead to underestimates of undersized unwanted catch. Other changes that have occurred may also contribute to observed trends in selectivity such as the introduction of other management measures, quota changes, effort restrictions, changes in fishing behaviour and others.

Incidentally, STECF notes that there may be some inconsistencies in the lists of the technical measures identified by EWG 20-02 for the individual stocks, and highlights that these lists are not exhaustive. In some cases, the implementation dates relate to the date the specific regulations were introduced and do not necessarily take account any lead-in times included in the Regulations. Furthermore, the fact that technical measures are introduced does not necessarily mean that they will be implemented in full by the industry, which may mean that the intended effects on selectivity are not delivered.

As such, STECF notes the difficulty to fully interpret the observed trends. For those stocks where no changes were detected over time, the absence of change in indicator should not be seen as proof that the TM had no effect at all, but at least that the effects were not strong enough to be detected at population level by standard stock assessment procedures using standard data. For the stocks where changes in selectivity of recruiting year-classes appear to be coincidental with the timing of the introduction of certain technical measures, it remains difficult to ascertain that this change is caused directly by the introduction of the technical measure (Item 2 of the ToRs). The EWG could also, thus, not fully evaluate the performance of technical measures to conserve fishery resources and protect marine ecosystems according to Article 31 of Regulation (EU) 1241/201 (Item 1 of the ToRs).

ToR 1-3 Conclusions

1. *Evaluate the performance of technical measures to conserve fishery resources and protect marine ecosystems according to Article 31 of Regulation (EU) 1241/2019.*

The results of the investigations undertaken by the EWG 20-02 do not permit STECF to provide a comprehensive informed response to this request. The request is extremely wide-ranging in scope and to address it explicitly and provide an informed, meaningful response, will require far more time and expertise than that afforded to EWG 20-02 and to this STECF review.

Suggestions on what needs to be done to support the Commission to provide future reports to the European Parliament and the Council in accordance with Article 31 of Regulation (EU) 2019/1241 are given in the section below headed "Future Developments".

2. *Evaluate the extent to which technical measures both at regional level and at Union level have contributed to achieving the objectives set out in Article 3 of said Regulation and reaching the targets set out in Article 4, including progress that has been made or impact arising from innovative gear.*

The EWG 20-02 report provides informative overviews of temporal trends in selectivity for juveniles (recruiting year-classes) for selected species and regions, but the extent to which such changes can be attributed to implementation of technical measures cannot be deduced from the approach taken. For some stocks changes in selectivity of recruiting year-classes may be coincident with the timing of the introduction of technical measures. Even in such cases, however, it is not possible to ascertain whether the changes are directly due primarily to the introduction of technical measures or to a combination of technical measures and other factors (although the selectivity indicator is considered robust to variations in recruitment and in total fishing pressure). Hence, based on the work of the EWG 20-02, STECF can only partly provide an informed evaluation of the extent to which technical measures have contributed to the conservation of fishery resources and the protection of marine ecosystems.

Regarding the target set out in Article 4 that catches of marine species below the minimum conservation reference size are reduced as far as possible, STECF notes that the FDI EWG 20-10 has adopted a methodology to partition catches at age into numbers of fish above and below MCRS, and has applied it to all stocks and fisheries for which the relevant data are reported under the FDI data call, by country, year, area and métier and for the years 2015-2019. The EWG 20-10 was unaware of the availability of such data and analyses but STECF considers that the data may prove useful for future reviews and may also be informative to DG MARE in preparing its 2020 report to the European Parliament and the Council.

3. *Advise on the most appropriate selectivity performance indicator for comparative evaluation of fishing gears according to Article 16 of Regulation 1241/2019. In preparing its advice, STECF may inter alia consider the use of the length of optimal selectivity Lopt compared to the average length of fish caught. Where possible, EWG 20-xx should calculate time-series of the appropriate selectivity indicator for each of the main commercial fish stocks and areas, considering those included in Anne XIV of the TMR.*

A comprehensive investigation into the most appropriate selectivity performance indicator for comparative evaluation of fishing gears according to Article 16 of Regulation (EU) 1241/2019 could not be undertaken with the data and resources available at the time of the EWG. The suitability of using ratios such as Lmean/Lopt or Lc/Lc_opt[4] as the basis for such an indicator was not explored further.

The EWG was able to address the latter part of this request and provide time-series of trends in selectivity for juveniles for selected fish stocks and areas. Nevertheless, for several reasons as outlined above and in the EWG 20-02 report, especially those relating to estimating fishing mortality at age and the assumptions regarding selectivity at age in the assessment model, the results need to be interpreted with caution.

ToR 4 Innovative gears

STECF notes that in relation to item 4 of the terms of reference on innovative gears, the EWG only briefly referred to it as the ICES 2020 advice was only published in late October 2020 and thus not available at the time of the EWG meeting.

STECF notes that ICES (2020) defines "innovative gear" as a gear or a significant component of a gear that is different from the baseline in the current EU regulations or, in the absence of such legislation, different from the gear commonly used in a specific sea basin (area) in EU waters.

ICES developed a framework for assessing the performance of innovative fishing gear based on three assessment criteria: (a) catch efficiency, (b) selectivity on target species and reduction of catch of unwanted and incidental species, and (c) impacts on the ecosystem, evaluated on a relative scale (i.e. scored relative to the existing gear). For each criterion an innovation matrix was created, relating the potential performance improvement (disruptive, transformative, incremental, no effect or negative) and technology readiness level (low, moderate, high; columns) of innovative gears.

STECF notes that ICES then used the framework to create an initial catalogue of innovative fishing gears for EU fisheries. It contains 33 example factsheets that are indicative of gear innovations in different areas in EU waters, but it is not an exhaustive list. STECF acknowledges the interest of monitoring progresses with innovative gears being developed or used in EU waters and notes that additional information could be provided from projects such as Discardless (http://www.discardless.eu/), Minouw (http://minouw-project.eu/) and Gearing Up (https://gearingup.eu/). Additionally, STECF suggests that consideration be given to innovative technologies that are being developed in projects such as SmartFish 2020 (http://smartfishh2020.eu/) that also have the potential to improve selection, reduce bycatch and minimise the environmental impact of fishing gears.

4 Lmean/Lopt is the ration of the current mean size and the optimal one, while Lc/Lc_opt is the ration of the current length at first catch to the optimal one

STECF agrees with ICES that its advice is a first step into a longer time-frame process, where a more comprehensive review of gear innovations and their impacts could be provided to the EU on a triennial basis. STECF considers the framework developed by ICES is appropriate to assess the performance of innovative fishing gear. However, as recommended by ICES, further work should include the level of gear uptake by fishers and sociotechnical aspects associated with the innovation (financial aspects such as investments and cost reduction, user-friendliness, and health and safety) should be part of a comprehensive state-of-the-art review.

STECF notes that prior to future reviews of the TMR, there is a need to continue develop a comprehensive framework of criteria and methods for evaluating the extent to which the implementation of technical measures has contributed to achieving their stated objectives and the wider objectives of the CFP. This framework should also be able to assess the potential for innovative gears to contribute to achieving such objectives.

From the perspective of scientific evaluation, it would also seem appropriate that regional fisheries bodies especially ICES and the GFCM in addition to the STECF become involved in such a process.

ToR 4 Conclusions

4. *Assess the progress made or impact of innovative gear and evaluate the use of innovative gears, drawing conclusions about the benefits for, or negative effects on, marine ecosystems, sensitive habitats and selectivity based on the most recent advice from ICES and other relevant scientific organizations.*

STECF concludes that the extent to which innovative gears can contribute to reaching the TMR objectives and targets depend on these being first taken up by fishers and adequately monitored during a sufficient time frame before they can be evaluated.

STECF concludes that the assessment framework developed by ICES for innovative gears would need to be combined with a holistic fishery simulation model to assess whether the potential improvements brought by the selective gears are likely to be of any significant effect at population level, considering the appropriate selectivity indicators.

ToR 5 Estimates of sensitive species by-catch rates

STECF notes that in response to item 4 of the terms of reference, the EWG 20-02 report includes an overview and a catalogue (excel file) of sensitive species compiled from different sources[5]. This list presents for each species where bycatch data exist and where it is lacking. The EWG report also includes an overview of mitigation measures aimed at protecting sensitive species. The EWG provides a direction for future work, including among others, measures such as an increase in monitoring (métiers, spatial and temporal coverage), species identification, abundance estimation and thresholds.

The EWG 20-02 report concludes that there is very limited data to reflect historic development in population size and/or bycatch of sensitive species and hence, whether the TMR objectives and targets regarding sensitive species have been or are being achieved, cannot be evaluated. However, the Expert group tried to make an inference of the impact of fisheries on sensitive species based on the historical trend of fishing pressure (based on the STECF CFP monitoring report (STECF 20-01) of the fisheries assessed as high risk of

5 2018 prohibited species list of the EU fishing opportunities regulation, Birds and Habitats Directives, IUCN red list, ICES WGBYC and WGBIODIV, OSPAR, GFCM, Barcelona Convention, CITES, etc.

encountering and impacting sensitive species. Based on the FDI database and for the period 2015-2018, the Expert group report also present trends in fishing effort per region and in some regions by métier.

The EWG 20-02 analysis moves forward the work needed to evaluate the TMR objectives and targets in relation to sensitive species. However, STECF also notes that, as reported by the EWG, although bycatch mortality of sensitive species is likely to have decreased in Atlantic waters (including Baltic Sea) due to a decrease in fishing pressure (a general reduction in fishing mortality rates), this does not necessarily relate to changes in technical measures. In the Mediterranean no such effort reduction has been observed

STECF further notes that estimating bycatch thresholds is not straightforward and estimates rely on several aspects including i) the conservation objectives and targets for the sensitive populations, ii) the timescale over which such objectives and targets are to be met and iii) available estimates of population size.

STECF notes the EWG's comment on the need for effort data, specifically relating to fixed nets, to be used in stock assessments to determine species status. STECF underlines that many such data are available in FDI data set. Although not used by the EWG, STECF notes that data on fishing effort in the years prior to 2015 is still available from the old FDI data, and also reported in ICES fisheries overviews for the NorthEast Atlantic region, if the EWG's effort analysis was to be extended longer back in time..

ToR 5 Conclusions

5. *Report on the best available estimates of sensitive species (incl. seabirds, sharks, turtles, cetaceans) disaggregated by species, fishery and Member State in relation to the conservation status of each species with an assessment whether by-catch rates are changing over time and to identify problematic fisheries that may require specific attention.*

STECF concludes that the EWG 20-02 report documents the information requested to the extent possible. Based on numerous sources, the report lists sensitive species that are impacted by fisheries, identifies problematic fisheries and provides a preliminary assessment whether by-catch rates have changed over time. Nevertheless, significant knowledge gaps remain, notably in reliable population estimates for many species and areas. With future TCM reviews in mind, STECF recognizes the need to develop a more comprehensive methodology to evaluate and assess the impacts of fisheries on sensitive species.

STECF concludes mitigation measures to reduce sensitive bycatch are not straightforward, and the investigation of alternative options must continue to be sustained. Additionally, STECF notes that the degree of compliance in the uptake and use of existing mitigation measures in identified high risk areas and fisheries is unknown, and might need to be strengthened.

ToR 6 Impacts of fisheries on habitats

The EWG 20-02 highlights vulnerable marine ecosystems (VMEs) as the most sensitive habitats impacted by fishing, and points out that VMEs are defined by the 2009 FAO criteria and further qualified by thresholds specified by the 2020 ICES/NAFO Joint Working Group on Deep-water Ecology (WGDEC). The EWG report provides an overview of the information available to identify recovery of fished areas based on the work carried out by the ICES Working Group on Fisheries Benthic Impact and Trade-offs (WGFBIT) in the context of the reporting requirements under MFSD. STECF notes that as referenced by the EWG, ICES is currently assessing the impact of bottom-contacting gears within 5 ICES ecoregions. A review of existing areas closed to bottom trawling under the Habitats and MSFD is also presented in the report.

The EWG 20-02 reported on possible management measures for sensitive species and habitats, including the possible impact of innovative trawl gears with the potential to reduce benthic impact. STECF agrees with the conclusion of the EWG that the areas closed under the previous TMR or other EU regulations may have been effective in preserving some vulnerable ecosystems located in deep-sea areas, as the measures taken are straightforward by prohibiting the use of bottom contacting gears and some passive gears in these areas. However, STECF notes, as acknowledged by EWG 20-02, closed areas implemented to protect and rebuild commercial stocks can indirectly reduce the impact on seabeds and protect marine ecosystems, but only if the total spatial footprint of fishing is reduced.

ToR 6 Conclusions

6. *Report on data on impacts of fisheries on habitats and ecosystems that help to identify areas where further efforts are needed to address adverse impacts on the sensitive habitats including vulnerable marine ecosystems (VMEs).*

STECF concludes that the EWG provided the information requested on the impacts of fisheries on habitats to the extent possible given the available information and resources.

STECF notes however that objective 2(c) specified in Article 3 of the TCM Regulation (Regulation (EU) 2019/1241) states [Technical measures shall] *"ensure, including by using appropriate incentives, that the negative environmental impacts of fishing on marine habitats are minimised;"*. This specific aspect of incentives was not addressed by the EWG 20-02.

STECF notes that there is a long debate regarding the 'positive' incentives in fisheries management to promote compliance. Appropriate incentives have the triple benefit of i) increasing the odds of reaching the objective (reducing the impacts on marine habitats), ii) increasing the "buy-in" of the regulation by the sector, and iii) reducing the cost of enforcing and controlling the regulations. STECF notes that there is however little knowledge of the incentive structure in the currently implemented measures under the new TMR, and that the monitoring of the achievement of this specific objective would require dedicated social and economic studies.

STECF overall conclusions on the EWG 20-02 report

The STECF commends the work undertaken by the EWG 20-02 in attempting to address extremely demanding terms of reference under difficult circumstances and with limited data and resources and endorses the findings given in the report.

STECF notes that it is too early to be able to assess any resulting effects of the measures in the TCM Regulation (EU) 2019/1241, even if a 'precise' indicator or metric to assess the effects of technical measures at the population level (?) were available.

Future developments

The Terms of Reference to STECF on the evaluation of technical measures, which the EWG 20-10 were asked to address were wide-ranging and hugely ambitious. They essentially requested the STECF to provide the information required by the Commission to prepare their report to the European Parliament and the Council on the implementation of the TCM (Reg. 2019/1241) in accordance with the provisions of Article 31 of that Regulation.

During its discussion on the outcomes of EWG 20-02, it became clear to STECF that there is still scope for interpretation of precisely what was being requested by the Terms of Reference which largely reflect the provisions of Article 31 of the TCM.

On one hand, Article 31 specifies inter alia that "*following an evaluation by the STECF, the Commission shall submit a report to the European Parliament and to the Council on the implementation of this Regulation*", which may mean an evaluation of whether the measures introduced by that Regulation are indeed being implemented as the Regulation intended, based on supporting evidence provided by Member States and the Advisory Councils.

On the other hand, Article 31 also specifies "*That report shall assess the extent to which technical measures both at regional level and at Union level have contributed to achieving the objectives set out in Article 3 and reaching the targets set out in Article 4*". However, given that the Regulation has been in force since July 2019, a scientific evaluation of the extent to which the provisions of the technical measures Regulation have contributed to the targets and objectives is not yet possible; sufficient data and information are simply not yet available to allow such an assessment.

Hence, an alternative interpretation of Article 31 could be to assess the extent to which technical measures in general, from Regulations (EU) 850/98 (NE Atlantic), (EU) 2187/2005 (Baltic TMR) and (EU) 1967/2006 (Med Reg) onwards, have contributed to achieving the objectives and targets of Regulation (EU) 2019/1241. This was the approach followed by the EWG 20-02. However, discussions during PLEN 20-03 highlighted the ambiguity between backward-looking evaluations (ex-post) of historical technical measures, and forward-looking assessments (ex-ante) of Reg. 2019/1241.

Whichever is the intended interpretation, the EWG report does not provide all the information required for STECF to provide a fully comprehensive and informed response to all the terms of reference. Given that STECF will be requested to undertake an evaluation of the performance of the TCM every three years, some considerations on how to proceed in the future are provided below.

1. Define the scope for any future evaluations (e.g. is Article 31 specifically concerned with evaluating the performance of the measures in Regulation (EU) 2019/1241 in achieving the targets and objectives of that Regulation?).
2. Specify what is to be evaluated? From Article 31 it appears that evaluation of the performance of technical measures against objectives and targets is what is required, but given the diversity and number of fleets/fisheries and technical measures in different regions, it will be impossible to examine and assess each and every measure. Decisions need to be taken regarding which aspects of the TCM regulation and which fisheries are a priority bearing in mind the data and resources available as well as the nature and likely impacts of the different fleets/fisheries. The expectations of what STECF can deliver should be realistic and achievable and be able to inform against the targets and objectives. A way forward could be to assess the extent to which the targets set in the current regulation are being achieved, using a gear and area approach. This could provide a risk-based analysis, highlighting where more detailed assessment of the effects of the current TMR is a priority.
3. Regarding the most appropriate and informative indicators and metrics to use, discussions during PLEN 20-03 showed that there is still so far no single indicator to evaluate the full performance of technical measures, but different approaches used in complementarity may in the future provide a more holistic view of the paths towards the achievement of objectives and targets.
4. Which data sets are required to carry out the evaluations and who should provide this data?
5. In trying to assess the effectiveness of the measures included in the Regulation there is a need to assess the incentives for fishermen to adapt, adopt and buy-in to specific technical measures.
6. What is/are the appropriate forum/fora to undertake the evaluations? Would it be sensible to adopt a regional approach (i.e. different expert groups dealing with different regionally focused evaluations)?

7. Who should be involved? To evaluate the effects of technical measures requires knowledge of the regional fisheries, the stocks and the evolution of exploitation rates on the stocks and the extent to which various measures have been taken up in each region.

To address the above there is, firstly, a need to define the scope of future evaluations and to consider how best to convene a meeting involving the Commission, fisheries scientists gear technologists, data experts and regional fisheries experts (industry, academic, regional fisheries body or other expert disciplines).

STECF suggests that an initial discussion could take place in the December 2020 STECF Bureau meeting where the scope for future evaluations could be discussed. Once the scope is clearly defined, a decision needs to be taken on the appropriate way forward to address how best to plan for and carry out future evaluations to ensure that the Commission is furnished with the information to allow it to fulfil its obligations under Article 31 of the TCM regulation.

5.6 EWG 20-13: Fishing effort regime for demersal fisheries in the West Med

Request to STECF

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

STECF observations

EWG 20-13 was a follow-up to EWG 19-14 (October 2019), EWG 19-01 (March 2019), EWG 18-13 (October 2018) and EWG 18-09 (June 2018).

EWG 20-13 had the following TORs:

TOR 1. Update mixed fisheries models and F-E analyses for Effort Management Units (EMU) 1 and 2 with the most recent socio-economic and biological data and the most recent stock assessments. If possible, the estimated impact of the Covid-19 outbreak could be included to the 2020 data.

TOR 2. Based on the work of the FDI EWG in September 2020, compile and provide complete sets of annual data on fishing effort for the longest time series available up to and including 2019. This should be described in terms of fishing days, days at sea, GT*days and nominal effort by Member State, GSA and, where possible, by fishing gear.

TOR 3. To the extent possible, produce a time series of fishing effort data in hour, based on available literature and data.

TOR 4. Develop mixed-fisheries effort scenarios in EMU1 and EMU2. Examples of plausible management scenarios are:

a) 10% reduction in 2020 + no additional reduction of effort;

b) 10% reduction in 2020 + cumulated reduction* of 10% from 2021 to 2024 + closures areas**;

c) 10% reduction in 2020 + cumulated reduction* of 20% from 2021 to 2024 + closures areas**;

d) 10% reduction in 2020 + cumulated reduction* of 30% from 2021 to 2024 + closures areas**;

e) 10% reduction in 2020 + cumulated reduction* of 30% from 2021 to 2024 + closures areas** + increased capturability (e.g. annual increase of 3% in selectivity or technical improvement of fishing gear);

f) 10% reduction in 2020 + cumulated reduction* of 30% from 2021 to 2024 + closures areas** + effort reduction of other fishing gear;

g) 10% reduction in 2020 + 30% reduction in 2021 then no further fishing effort reduction + closures areas**;

h) 10% reduction in 2020 + reduction of 15% in 2021 + reduction of 15% in 2022 then no further fishing effort reduction + closures areas**;

i) 10% reduction in 2020 + reduction of 15% in 2021 + reduction of 15% in 2022 then no further fishing effort reduction + closures areas**+ effort reduction of other fishing gear;

j) 10% reduction in 2020 + cumulated reduction* of 40% from 2021 to 2024 + closures areas**;

k) 10% reduction in 2020 + cumulated reduction* of 50% from 2021 to 2024 + closures areas**;

* For instance, cumulated linear reduction of 10% (in fishing days) equally distributed by fleet segments corresponds to 2,5% reduction for each year from 2021 to 2024.

** Closure areas as adopted in French (Dec. 2019), Spanish (May 2020) and Italian (Aug. 2020) national legislations, see supp. material

TOR 5. Review of available bibliography on complementary solutions to achieve MSY by 2025, including but not limited to effort reduction conditioned to selectivity increase for trawlers, licencing and/or prohibiting recreational fisheries in the western Mediterranean Sea, participative management, differential effort reduction between fleet segments etc.

TOR 6. Using the advice structure developed in 2019 (EWG 19-14) and the Annex 1 of 2020 Fishing Opportunities (in supp. Material), provide a synoptic overview of: (i) the source of data and methods and; (ii) the management advice, including technical and conservation measures combined to a range of fishing effort reduction that secure the achievement of MSY by 2025 with limited socio-economic impact.

TOR 7. Discuss future steps in preparation of EWG 21-xx (likely in March 2021) that would investigate the impact of additional spatial closure scenarios, in combination with fishing effort reduction scenarios, in order to reduce the bycatch of juveniles of the six main demersal species in the western Mediterranean Sea. Regarding the TOR 1, STECF observes that EWG 19-01 in March 2019 had considered two possible avenues for future work:

STECF comments

STECF observes that all the ToRs have been addressed. STECF notes that the order of chapters in the report does not follow the order of Tors exactly but are rather grouped into data-related ToRs first and model-related ToRs afterwards. STECF comments follow this order.

Effort data

STECF observes that EWG 20-13 updated the datasets used for subsequent analyses using data from two other STECF EWGs that took place only a few weeks before EWG 20-13. These datasets were stock assessment data (from EWG 20-09) and FDI effort data (from EWG 20-10).

STECF observes that EWG 20-13 compared FDI data and effort reference levels in Regulation (EU) 2019/2236 in both effort management units EMU1 and EMU2. EWG 20-13 calculated the 2015-2017 and 2019 fishing efforts from the FDI of trawl gears and compared 90% of those values with the values from maximum allowable fishing effort in fishing days for 2020 set out in Regulation (EU) 2019/2236. STECF observes that such a comparison was not part of the initial ToR and acknowledges the effort made by EWG 20-13 to investigate the discrepancies between the effort data as reported by Member States under the FDI database and the effort ceilings given in the Regulation.

For EMU 1, STECF observes that, for most fleet segments in the two Member States operating in the area, the effort ceiling prescribed in the Regulation was greater than the 10% reductions estimated from the effort reported by Member States and held in the FDI database.

For Spain, the EWG 20-13 considered that the discrepancies were likely to be imputable to some extent to erroneous submissions in the FDI. A number of data issues were observed, some combinations of FDI variables "gear type" and "fishing technique" were considered erroneous and information on fleet segmentation was missing. During the EWG Spain provided a new excel sheet with FDI data including the info on fleet segmentation. Yet even in that new dataset used by the EWG, the number of fishing days of the baseline 2015-2017 calculated with FDI data is lower than that reported in the Annual Economic Report, which is itself more in line with the regulation. The data issues were reported by the EWG in the DTMT.

For France, STECF notes that further data checks were performed by the EWG during and shortly after the STECF PLEN 20-03 meeting week, and provided further insights that were subsequently added to the draft version of the report available to PLEN 20-13. These checks also demonstrate some differences in effort data submitted by France to AER and to FDI.

STECF underlines that these data discrepancies were already investigated and flagged by the previous EWGs 18-13 and 19-14. STECF insists that these should be carefully investigated and corrected before the next FDI datacall in 2021, considering that this database is intended to be the most complete and up-to-date reference database for EU effort and catch data.

STECF notes that these discrepancies have implications for the modelling work, considering that models are parameterised using the FDI time series for the estimation of catchability per fleet and species. In addition, EWG 20-13 concluded also that based on current observations for 2020 the effort ceilings will likely be fully used in 2020, in spite of the reduction of activity during the second quarter of the year following COVID_19. STECF notes that the EWG 20-13 thus decided to set effort in 2020 at the levels given in the Regulation for the parameterisation of models' simulations. This implies an increase of fishing effort for some fleets in the simulations compared to 2019, and when combined with 2019 catchability estimates, an assumption of a limited increase of fishing mortality for most stocks in 2020 compared to 2019. This thereby reduces slightly the estimated effectiveness of the plan and the likelihood of achieving the MSY objective for all stocks by 2025 in the simulations, compared to assuming a total fishing effort in 2020 being equal or less than the observed effort in 2019.

For EMU2, EWG 20-13 observed fewer discrepancies between FDI and Regulation 2019/2236, with fishing opportunities for 2020 per fleet segment being in line with 90% of the observed effort in the reference period (2015-2017). However, some issues remain in the discrimination of fishing days performed on the continental shelf and upper slope, from those on the lower slope targeting red shrimps. The reasons for these discrepancies are not fully understood and should be investigated further by the Member State.

Regarding ToR 2, STECF observes that the FDI data used by the EWG 20-10 provide the trends of fishing effort (fishing days, days at sea, nominal effort in kw*fishing days, nominal effort in GT*fishing days) by EMU, Country, GSA and main gear for the period 2015-2019.

Regarding ToR 3, STECF observes that FDI data on hours at sea in EMU1 are available only for the last two years (2018 and 2019) for all GSAs, except GSA7 where no hours at sea data are available. For EMU2, hours at sea are not available for GSA 8.

Fishing effort-fishing mortality relationships

Regarding ToR 1, STECF observes that the F-E analyses were updated with the most recent data. STECF observes that most of the updated F-E relations show the difficulties in correlating fishing mortality and effort (fishing days) exerted by the fleets exploiting the

stocks. Some relationships are flat or have the slope in the opposite direction (so that larger effort corresponded to lower fishing mortality in the historical time series, and vice versa) and differ from the regressions that are forced through the origin (assuming that zero effort implies zero fishing mortality). This implies that future reductions in effort expressed as fishing days will likely not translate into equivalent reductions in fishing mortality (hyperstability). STECF notes however that the issues with FDI data flagged above undermines to some extent the usefulness of the F-E analyses presented; and these would need to be updated when data have been corrected.

STECF also observes that measuring the fishing activity by considering the fishing hours instead of fishing days may improve the results of modelling. However, EWG 20-13 could not perform such analysis because fishing effort expressed as fishing hours is available only for a short time series from the 2020 FDI data call.

Models and scenarios

Regarding ToR 1, STECF observes that all the mixed fisheries models were updated by EWG 20-13. In particular the IAM model in EMU 1 was updated with 2019 data and extended to include age-structured population dynamics of multiple stocks and fleet parameters for France and Spain. STECF observed however that the economic variables for the Spanish fleets were not made available at the scale consistent with the definition of fleets used in the model and could not be included. It would be advisable in future to provide them in the adequate format to complete the IAM data input for Spain.

STECF observes that different assumptions were made to adapt the IAM model to spatial closures and encourages complementing such an approach with spatially explicit models, also taking into account the guidelines proposed by STECF PLEN 19-03 and 20-01.

The BEMTOOL model in EMU2 was updated and implemented with seven stocks assessed during EWG 20-09. STECF observes that the comparison of F, SSB and catch showed a good level of agreement between BEMTOOL and the stock assessment results. SMART model in EMU2 was implemented for four stocks and with VMS data from Italian trawlers.

STECF notes that the use of two different models in EMU 2 (one being fleet- and stock-based and one being individual-based and spatially explicit) provides a useful holistic view of the expected effects of the plan.

STECF notes that the approach followed by the EWG is consistent with ICES procedures of annual monitoring of the other EU MAPs in the NorthEast Atlantic waters.

Regarding ToR 4, STECF notes that all the scenarios required in the ToRs could be simulated using available models, both for EMU 1 (IAM model) and EMU 2 (BEMTOOL and SMART models).

For EMU 1, STECF notes that stocks of hake in GSAs 1-5-6-7, red mullet in GSA 6, Norway lobster in GSA 6 and blue and red shrimp in GSAs 6-7 are significantly overexploited. None of the scenarios tested with IAM would allow the achievement of Fmsy by 2025. Nevertheless, all scenarios from c) to k) predict some positive effects on the biomass of the stocks even under current poor levels of recruitment. STECF observes also that F for red mullet in GSA1 reaches Fmsy upper in 2025 under scenarios f) and i), which consider some effort reduction for other gears in addition to trawlers.

For EMU2, STECF observes that hake in GSAs 8-9-10-11 and blue and red shrimp in GSAs 9-10-11 are the most overexploited stocks and the reduction of fishing effort predicted in the West Med MAP would not be sufficient to reach Fsmy by 2025. STECF notes that the effect of closed areas would not be enough to change the exploitation patterns for the hake stock.

STECF observes that red mullet in GSA9 and red shrimp in GSAs 9-10-11 would reach Fmsy with scenario j). STECF notes that SSB of hake will benefit from scenarios including some effort reduction for other gears in addition to trawlers. STECF observes that three stocks (red mullet GSA10, dee-water rose shrimp in GSAs 9-10-11 and Norway lobster in GSA9) will remain underexploited in most scenarios.

Considering all these results, STECF advises that additional measures may be needed in both EMUs to reach the objectives of the management plan for all stocks. This might include, inter alias, limitations for passive gears targeting hake and red mullet, additional areas closures and fishing effort limitations, also catch limitations for some stocks and increases in minimum conservation reference sizes, where appropriate.

In this context, STECF observes that EWG 20-13 provides in ToR 5 information on three projects (SafeNet, GALION and MANTIS) related to fisheries management in the Western Mediterranean, as well as a number of reports and published literature on this subject. STECF observes that these projects and scientific papers point out a number of useful suggestions that could help in achieving MSY in the West Med, such as area closures might have positive effects on fishery productivity on the long term (15 years and more); other fishing activities (i.e., small-scale and recreational) should be considered in addition to trawling in effort management; a 50mm square-mesh for deep-water fisheries could improve gear selectivity; a 40mm square-mesh is suggested when Norway lobster is the main target species; a 40mm T90 mesh might significantly reduce the catches of small-size hake and red mullet; the use of more hydrodynamic bottom-doors and a lighter gear might reduce the impact of trawling on the seabed.

STECF conclusions

STECF concludes that the EWG 20-13 as the most recent EWG of a series of EWGs dedicated to the fishing effort regime in the Western Mediterranean has made clear progress in assessing the consequences of the effort regime in the Western Mediterranean. STECF concludes that EWG 20-13 followed the 2018 road map described in EWG 18-13, which aimed at performing the necessary steps to deliver operational and up-to-date mixed-fisheries models by the end of 2020. While further improvements could still be brought in, the models presented now allow assessing various management strategies in terms of both their likelihood to achieve the objectives of the MAP plan and their impact on the economic outcomes for the fleets. The annual update of these models incorporating the most recent stock and fleet data will also allow monitoring the future performance of the MAP.

STECF concludes that all scenarios simulated indicate that F_{MSY} will not be achieved for all stocks by 2025 and advises that additional measures may be needed in both EMUs to reach the objectives of the management plan.

STECF concludes that all scenarios tested with mixed fisheries models predict some decreases in the economic indicators during the first years of implementation. Such decreases are not immediately offset by the expected increase landings following stock rebuilding. However, some scenarios (i.e., including effort reduction for other gears in addition to trawlers) show positive effects in the medium term, both for the recovery of the stocks and for the economic returns for the fleets.

STECF concludes that the data errors and the discrepancies between the fishing effort estimates as available from FDI data, from the AER data and the effort ceilings given in Regulation 2019/2236 should be investigated further by the Member States, and corrections should be performed before the next FDI data call in 2021.

STECF concludes that the poor relationship between fishing effort and fishing mortality remains a major concern for the effort-based management of mixed demersal fisheries, potentially blurring the expected effects of the effort reduction, especially during the first years of implementation of the plan.

5.7 EWG 20-06: Annual Economic Report of the EU fishing fleet (AER II)

Request to STECF

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

STECF comments

Introduction

The AER is the most comprehensive source of economic and social data for scientific advice on the performance of the EU fishing fleet. It is increasingly used by scientific bodies, national administrations and international institutions. The main objective of the report is to obtain high quality interpretation of all data outputs to ensure the usefulness of the report for DG MARE's policy development, Member States and the fishing industry. The analysis is done at the EU, regional, national and fleet segment levels.

The STECF Expert Working Group EWG 20-06 (AER II) took place virtually from the 12 to the 16 of October 2020. This is a working group in a series of two: EWG 20-03 (AER I) with the objective to obtain and validate the national and regional data and EWG 20-06 (AER II) with the objective to produce the final Annual Economic Report on the EU Fishing Fleet.

The EWG was composed of 33 independent experts, 3 STECF members, and 2 from the European Commission's Joint Research Centre (JRC) (including a Chair).

Key findings

The STECF Expert Working Group (EWG) 20-06 was tasked to build upon the findings of EWG 20-03 for the analysis of economic data in fisheries, and the subsequent analysis and use of the EWG 20-06 data continued from EWG 20-03.

STECF notes that the main objective of EWG 20-06 was to produce the final EU Overview and Regional chapters with the economic data series available up to 2018 and a nowcasting exercise for 2019 and 2020. Potential improvements and refinements in the collection of economic data in EU fisheries have been also discussed.

STECF notes that estimates of recent economic performance of the EU fishing fleet are produced using 'nowcasting' techniques. For most variables, the same nowcasting methodology as in AER 2019 was used for fleet segments operating in the Northeast Atlantic (NAO), the Mediterranean and Black Sea (MBS), and other fishing regions (OFR).

Recalling that the opportunity cost of capital is the revenue forgone when investing capital in the fisheries sector and not in a risk-free investment, STECF acknowledges that net profit should better be computed using a deflated 3.5% capital long term rental rate (Carvalho et al 2020). STECF notes that given that this is a significant change compared to how net profit is currently calculated in the AER (using the 5 years bonds as a proxy of risk free interest rate), a comparison between the current procedure and the deflated 3.5% rate should be performed in order to understand the consequences of this change.

STECF commends the effort of the EWG to reduce the length of the report to provide more succinct and informative findings for Member States, policy makers and industry.

Data issues

STECF notes that although the coverage and quality of data submitted by Member States has improved over the years, it is still not possible to have a full overview of the economic situation of all EU fishing fleets due to lack of some data from some Member States, aggregation of segments and confidentiality issues. However, STECF notes an important improvement to have available data for Greece in the EU overview for 2018.

For the EU Outermost Fishing Regions STECF observes that there remain important data issues for the French outermost regions, with data missing prior to 2017, and some data gaps remaining after 2017; but progresses have been made as good quality of data has been reported for Guadeloupe.

For the data on long distance water fleets operating in Other Fishing Regions the main issue is not availability of the data, but how the economic data can be allocated to areas/RFMOs (ICCAT, IOTC, NAFO, CECAF, WECFC) when fleets move across areas. The AER II provides new regional data for 2018 in the ICCAT (Mediterranean and Black Sea), which is however, still incomplete. Also, there are some confidentiality issues relating to the number of vessels operating in particular fleets.

Covid-19 forecast impacts

STECF notes that the AER II report does not include an impact assessment of the COVID-19 on the EU fisheries. Rather, it provides the usual forecast with an update of the socio-economic impact of the pandemic on the EU fishing fleet.

For the 2020 AER, the nowcasting methodology has been adjusted to account for the current and anticipated impacts of COVID-19. The main change to the nowcasting methodology due to COVID-19 is the introduction of a 'COVID-19 adjustment factor', which is based on four sources of data (an Aggregated Catch Data Report (ACDR) data on Member State landed weight; an Automatic Identification System (AIS) data on fishing vessel density by Member State Economic Exclusive Zone (EEZ); a survey sent out to the fishing industry and fishing experts co-ordinated by AER national experts; and Member States national data on landed weight, where reported). When discrepancies among the data sources were identified, all data sources were equally weighted. This adjustment only applies to 2020 and the methodology for 2019 remains unchanged. However, STECF notes that the 2020 nowcast methodology is based only on data from the first semester of the year, and that fishing effort of some of the segments may recover to similar levels as in 2019 during the second semester. This could result in an underestimation of the fishing activity of the fleets in 2020 and therefore, to an underestimation of the actual economic performance for 2020.

STECF notes that the adjustment factors were calculated at the fleet segment level, although for many Member States the adjustment factor is the same for all fleet segments (i.e. when surveys did not report on specific fleet segments and when MS monthly landings were not available by fleet segment). However, future reports can test the accuracy of these sources against 2020 current values and provide insight regarding their suitability for the nowcasting methodology.

STECF observes that each national chapter provides a section to describe the financial support measures proposed or implemented at Member States level in support of the COVID-19 before July 2020.

STECF notes that the European Commission requested information on impacts of the COVID-19 crises on fisheries and aquaculture for EWG 20-06 and EWG 20-12. For both reports similar methodologies should be applied as far as possible. STECF notes however that there will be, differences between the two sectors as there will be more information available on the development of key variables in 2020 for fisheries than aquaculture, e.g.

landings per month for fisheries vs. production data per month for aquaculture, which are not available.

Growth accounting

STECF observes that a new indicator -Total Factor Productivity (TFP)- is also computed for EU fisheries in the period 2008-2018. It is made by producing an estimation of the TFP that summarizes all the capital (capital services) and labour productivity into a single number. STECF notes that TFP is computed to analyse the sources of GVA growth in the EU fleets. This growth accounting is performed for aggregated fleets in two EU main sea areas: North Atlantic Ocean (NAO) and the Mediterranean and Black Sea (MBS). A distinction is also made among large-scale fleets (LSF) and small-scale coastal fleets (SSCF) in each area, and whether targeting demersal or pelagic species (D/P) for the LSF. Higher TFP levels have been estimated in the SSCF than in LSF, which suggests that SSCF are more efficient in the use of their input factors than LSF. However, a deeper analysis is required to determine which factors cause this difference.

STECF notes that the TFP is an important and powerful contribution that can be interpreted as an economic efficiency indicator of the general fisheries policy success.

STECF conclusions

STECF endorses the outcomes of the EWG 20-06 and concludes that the EWG answered the ToRs and that the current set of data has been validated and is fit for purpose.

STECF concludes that the clearer distinction of the TOR for the AER I and AER II meetings reduced the necessary effort for data checks in the second meeting. An advantage was that the data was already endorsed at the summer plenary and could not be changed for the second meeting. STECF concludes that it has not negatively influenced the quality of the report as only minor data issues were detected. It is important that in the coming years when the two meetings are again in April and June that also then after the data upload deadline (two weeks after AER I) no new data uploads will be possible.

STECF concludes that the current procedure to compute net profit should be changed towards computing using a deflated 3.5% capital long term rent rate, and sensitivity analyses should be conducted in order to understand the consequences of this change.

For the regional data and for the Outermost Regions some data issues are to be solved over the coming years. As for the Other Fishing Regions economic data and information are available but the allocation of the data to the proper area/RFMO, using the proper approaches to allocate e.g. direct/indirect employment and income, also because the fleet moves between areas during the year, and companies are operating as integrated entities, is difficult. Noting that the distant water fleet is an important fleet and in addition that the main issue relates not so much to availability and quality of data but relates to the methodology used to allocate data to areas/RFMOs (ICCAT, IOTC, NAFO, CECAF), STECF concludes that for the methodology to allocation of data for the Other Fishing Regions, a separate contract is issued to structure the analysis and update the current methodology used.

In order to address the issues relating to the Outermost Regions it is concluded that further cooperation is ensured between different recurrent working groups dealing with fisheries data (AER I and II, Balance, FDI and EWG on social data), and hence different data sources/calls. Additional considerations on data issues are also discussed in outermost EWG 19-19.

5.8 EWG 20-15: Stock assessments in the Mediterranean Sea 2020 – (Adriatic, Ionian and Aegean Seas)

Request to STECF

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

STECF observations

The expert working group met online from 12th to 20th October 2020. The meeting was attended by 14 experts, including two STECF members and two JRC experts. One DG MARE representative and two observers also attended the meeting.

The main objective of the meeting was to carry out assessments and provide draft advice for the demersal stocks in the Adriatic, Ionian and Aegean Seas as listed in the ToRs. Broadly, the ToRs consisted of data preparation, stock assessment, estimation of reference points, short and medium-term forecasts, identification and reporting of data issues and provision of synoptic overview for management advice.

STECF considers that the EWG addressed adequately all the ToRs and notes that the EWG carefully reviewed the quality of all the assessments produced.

STECF observes that given that the boundaries of some of the suggested stocks are not clear, the EWG therefore worked on the basis of species/areas combinations. Overall, 15 species/areas combinations were evaluated for assessments (Table 5.8.1). Seven of the species corresponding to the Adriatic Sea were assessed last time by STECF in 2019 (STECF EWG 19-16), whereas the five species in the Aegean and Ionian Sea were assessed last time in 2017 (STECF EWG 17-15). The Caramote prawn in Northern Adriatic Sea (GSA 17) was considered for the first time. Additional advice for GSA 17 separately was provided this year for Common cuttlefish and Spottail mantis shrimp.

STECF notes that for seven of these species/areas full catch advice was provided for 2021 based on age-based analytical assessments and short-term forecasts. For one species/area (Norway lobster in GSA 17-18) full catch advice was provided based on a surplus production biomass model (SPiCT). Other two species/areas (common cuttlefish in GSA 17 and in GSA 17-18) were also assessed based on a surplus production model (CMSY) but the catch advice was generic and not specific for 2021. For sole in GSA 17 and Caramote prawn in GSA 17, the catch advice followed the ICES Category 3 advice rule based on abundance indices. As it was unclear if these stocks were exploited above or below F_{MSY}, the precautionary buffer of -20% catch reduction was applied. For hake in GSA 20, hake in GSA 22 and deep-water rose shrimp in GSA 22, it was not possible to obtain either coherent assessments or to give index advice due to uncertain historic catch data and sparse survey indices, so no advice could be provided.

F_{MSY} could be estimated for four species/areas (hake in GSA 17-18, Norway lobster in GSA 17-18 and Common cuttlefish in GSA 17-18 and GSA 17). For all of the other stocks evaluated using a4a, it was not possible to carry out full evaluations of MSY due to the limited number of years of data and $F_{0.1}$ was used as a proxy for MSY. MSY ranges (F_{low} and F_{upp}) were derived from the empirical formulas provided by STECF EWG 15-06. Given that $F_{0.1}$ is considered a precautionary proxy for F_{MSY}, F_{low} which is a lower exploitation rate, is also expected to be precautionary. Therefore, STECF considers that F_{low} and F_{MSY} can be

used directly. However, it was not possible to evaluate if F_{upp} is precautionary and STECF considers it should not be used to give catch advice without further evaluation.

Table 5.8.1 Summary of the work attempted and basis for any advice. A4A and SS3 refer to age-based assessment methods, CMSY and SPiCT are biomass surplus production models, STF is a standard short-term projection with assumptions of status quo F and historic recruitment and Index refers to the ICES Category 3 approach to advice for stocks without analytic assessments. Methods that are used for advice are in bold. The assessments noted from 2017 were tested assessment not considered suitable for advice.

Area	Common Species name	2019 Assessment	2020 Assessment
17-18	Hake	SS3 STF	a4a, **SS3 STF**
17-18	Red mullet	a4a STF	**a4a STF**
17-18	Norway lobster	SPiCT STF	**SPiCT STF**
17-18-19	Deep-water rose shrimp	a4a STF	**a4a STF**
17-18	Common cuttlefish	CMSY	SPiCT**, CMSY**
17	Common cuttlefish	CMSY	SPiCT**, CMSY**
17	Sole	a4a STF	a4a, **Index**
17-18	Spottail mantis shrimp	a4a STF	**a4a STF**
17	Spottail mantis shrimp	a4a STF	**a4a STF**
17	Caramote prawn		a4a SPiCT **Index**
19	Hake	a4a GFCM benchmark	**a4a STF**
20	Hake	SPiCT, a4a (2017)	a4a SPiCT **no advice**
22	Hake	SPiCT, a4a (2017)	a4a SPiCT **no advice**
22	Red mullet	SPiCT, a4a (2017)	SPiCT **a4a STF**
22	Deep-water rose shrimp	SPiCT, a4a (2017)	SPiCT **no advice**

The assessments indicate that for most of the stocks, biomass has been increasing over the last 3 years, while catch has been decreasing or stable. Six out of the 12 species/areas combinations are being significantly overfished (F2019> F_{MSY}), one is being fished close to F_{MSY} and three are underexploited (F2019< F_{MSY}), while the two species/areas following the Index advice require small catch reductions. The main results are summarized in the bullet point list below and in Table 5.8.2.

- Hake in GSA 17-18: the biomass is increasing. Catches should be reduced by at least 48% to reach FMSY in 2021.

- Sole in GSA 17: the biomass is stable. Catches may be increased more than 1% to conform to precautionary consideration in 2021.

- Red mullet in GSA 17-18: the biomass is increasing. Catches should be reduced by at least 29% to reach FMSY in 2021.

- Common cuttlefish in GSA 17-18: the biomass is increasing. Catches may be increased by no more than 56% to reach FMSY in equilibrium.

- Common cuttlefish in GSA 17: the biomass is increasing. Catches may be increased by no more than 49% to reach FMSY in equilibrium.

- Norway lobster in GSA 17-18: the biomass is increasing. Catches should be reduced by at least 8% to reach FMSY in 2021.

- Spottail mantis shrimp in GSA 17-18: the biomass is increasing. Catches may be increased by no more than 14% to reach FMSY in 2021.

- Spottail mantis shrimp in GSA 17: the biomass is increasing. Catches may be increased by no more than 41% to reach FMSY in 2021.

- Deep-water rose shrimp in GSA 17-18-19: the biomass is increasing. Catches should be reduced by at least 51% to reach FMSY in 2021.

- Caramote prawn in GSA 17-18: the biomass is fluctuating. Catches may be increased by no more than 11% to conform to precautionary consideration in 2021.

- Hake in GSA 19: the biomass is increasing. Catches should be reduced by at least 36% to reach FMSY in 2021.

- Hake in GSA 20: the biomass is unknown and catch advice is not available.

- Hake in GSA 22: the biomass is unknown and catch advice is not available.

- Red mullet in GSA 22: the biomass is increasing. Catches may be increased by no more than 207% to reach FMSY in 2021.

- Deep-water rose shrimp in GSA 22: the biomass is unknown and catch advice is not available.

Table 5.8.2. Summary of advice from EWG 20-15 by area and species. F 2019 is the estimated F in the assessment and used in the short-term forecast for 2020. Change in F is the difference (as a fraction) between target F in 2021 and the estimated F for 2019. Change in catch is from catch 2019 to catch 2021. Biomass status is given as an indication of trend over the last 3 years for stocks with time series analytical assessments or biomass indices. If the stock is considered to be in a low state or high state due to exploitation rate this is noted too. Biomass reference points are not available for any of these stocks.

Area	Species	Method/ Basis	Age Fbar	Biomass 2017-2019	Catch 2017-2019	F 2019	F 2021	Change in F	Catch 2019*	Catch 2021	Change in catch
17-18	Hake	SS3	1 - 4	increasing	stable	0.41	0.18	-56%	5361	2789	-48%
17	Sole	Index	biomass	stable	stable				1940	1960	1%
17-18	Red mullet	a4a	1-3	increasing	decreasing	0.69	0.34	-51%	4632	3285	-29%
17-18	Common cuttlefish	CMSY	biomass	increasing	stable	0.51 F_{MSY}	0.16	96%	4820	7530^	56%
17	Common cuttlefish	CMSY	biomass	increasing	stable	0.48 F_{MSY}	0.14	108%	4070	6070^	49%
17-18	Norway lobster	SPiCT	biomass	increasing	decreasing	0.40	0.36	-9%	1319	1218	-8%
17-18	Spottail mantis shrimp	a4a	1-3	increasing	declining	0.69	0.45	-35%	4372	4970	14%
17	Spottail mantis shrimp	a4a	1-3	increasing	stable	0.59	0.43	-27%	3201	4515	41%
17-18-19	Deep-water rose shrimp	a4a	0-2	increasing	increasing	1.49	0.50	-66%	5993	2915	-51%
17-18	Caramote prawn	Index	biomass	fluctuating	decreasing				768	864	11%
19	Hake	a4a	0 - 4	increasing	decreasing	0.33	0.14	-58%	594	379	-36%
20	Hake	-					No advice			No advice	
22	Hake	-					No advice			No advice	
22	Red mullet	a4a	1-3	increasing	stable	0.15	0.50	233%	1804	5546	207%
22	Deep-water rose shrimp	-					No advice			No advice	

* Estimated Catch from 2020 Assessments STECF EWG 2020

#F for *Nephrops* in 2021 is reduced slightly from FMSY to assist recovery of biomass because biomass in 2021 less than Bpa

^Common cuttlefish catch in 2021 will depend on recruitment in 2020 which is currently unknown values given for catch are indicative only and are long term mean values not suitable as a catch target for 2020 (See Section 5.4)

STECF considers that all of the 10 assessments presented in the report can be used to provide advice on stock status in terms of F relative to F_{MSY}, from which eight can be used to provide catch advice for 2021. STECF notes that all 7 age based assessments are based on short data series and some degree of uncertainty therefore remain, but STECF considers overall that they provide a robust guidance on the magnitude of changes in F and catches required to reach F_{MSY} by 2021. For the three surplus production models, the assessments are from longer series of data and can be used with MSY reference points.

STECF observes that GFCM agreed to adopt a Multi-Annual Plan (MAP) in the Adriatic Sea, with the objective to achieve F_{MSY} by 2026 (GFCM, 4-8 November 2019, Athens, Greece, http://www.fao.org/gfcm/meetings/info/en/c/1200549). For most stocks assessed, F2019 is substantially higher than F_{MSY} (Table 5.8.2), and it seems likely that some kind of transition approach will be required. Following STECF PLEN 19-03, the EWG has included an additional '$F_{MSY\ Transition}$' option in the short-term forecast tables based on a gradual linear change in F from 2020 to 2026. These entries in the STF table (Section 5 EWG report 20-15) are the best estimates of F and catch required in 2021 to follow a linear transition, but they do not take into account uncertainty in estimates or the current progress in transition. They should be considered as guide for progress towards F_{MSY} in 2026.

In response to one of the ToRs (ToR 1.3), the EWG compiled fishing effort data in GSAs 17, 18, 19, 20 and 22 up to 2019 in terms of days at sea by Member State/Country and fishing gear. Data up to 2018 originated from the Mediterranean and Black Sea data call, whereas data in 2019 were taken from the Fisheries Dependent Information (FDI) Data Call. STECF notes that these effort data are not directly used for any of the stock assessments. Given that these data are compiled and analysed in the FDI EWG, STECF considers the ToR on compilation of annual fishing effort data could be excluded from this assessment EWG without any deterioration of the quality of the stock assessment.

STECF notes that data quality deficiencies have been comprehensively addressed by the EWG for each stock in the report. STECF notes that biological data deficiencies have been also reported in the DTMT (Data Transmission Monitoring Tool) and should be addressed and corrected before the next submission. Two specific data issues are highlighted:

Firstly STECF notes that the EWG was not able to give catch advice for three stocks in GSA 20 and 22. This was due both to gaps in data but also due to data coherence issues. STECF notes that DG MARE – Unit C3 have agreed with the Greek Authorities to work together on a "plan of priority list of actions on Data Collection", in order to improve the situation in Greece. As part of that initiative a "Working Group on quality assurance" has been setup in Greece involving scientists from all institutes implementing Greek DCF. This initiative is in collaboration with the local authorities (DG of Fisheries - Ministry of Rural Development and Food). The goal of this WG is to: quality-check past data sets, resubmit historic data series to JRC in the DG MARE Med & BS data call next year, and to compile technical documents describing the sampling scheme and statistical estimation procedures. STECF would like to support and encourage this initiative and looks forward to the improvements in quality that this initiative will bring. STECF notes that the EWG also suggested that this approach could be supplemented by examining if the DCF data could be interpolated and or extended using Hellenic Statistical Authority data, STECF would support such an extension to the data improvement program.

Secondly STECF notes that the specific STECF EWG data processing workshop that was proposed for March 2020 was first delayed and then cancelled due to covid-19. STECF notes that the data problems that were to be addressed by this EWG still exist and considers that the work proposed is still required. Therefore STECF supports the rescheduling of this data EWG at a suitable time in 2021 prior to the other EWGs next year.

STECF conclusions

STECF concludes that the EWG addressed all the ToRs appropriately.

STECF endorses the assessments and evaluations of stock status produced by the EWG. STECF concludes that the results of the assessments accepted by the EWG provide reliable information on the status of the stocks and the trends in stock biomass and fishing mortality and that no advice can be given for the three assessments rejected by the EWG.

Given that the effort data are not directly used in any of the stock assessments and are otherwise analysed by FDI EWG, STECF concludes that the ToR on compilation of annual fishing effort data could be excluded from this EWG (and addressed through the FDI process instead) without any deterioration of the quality of the stock assessment.

STECF concludes that the data errors reported should be addressed and where possible corrected before the next data submission. This is particularly relevant for GSA 20 and 22 where several data issues are hindering the possibilities to obtain reliable stock assessments and provide catch advice.

5.9 EWG 20-16: Revision of Work Plans for data collection and data transmission failures

Background provided by the Commission

The EWG 20-16 was asked to:

- evaluate the amendments to national work plans (NWP) submitted by Member States and the regional work plans (RWP) submitted by regional coordination groups (RCGs) by 31st October 2020, in terms of conformity, scientific relevance of the data and quality of the methods and procedures;
- to provide feedback on the complete evaluation process of the RWP, including relevant issues encountered and how they solved them;
- to provide input on the preparation of new templates and guidance for the submission of future work plans and annual reports in line with the future EU MAP from 2022 onwards, based on the outcomes of ad-hoc contract work available on 23 October 2020.

Request to STECF

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

Summary of the information provided to STECF

The EWG 20-16 met virtually 2-6 November 2020. Since the meeting took place the week before STECF PLEN 20-03, the final EWG report was not yet available to PLEN 20-03. The following STECF comments and suggestions are based on discussions among STECF members and a presentation of outcomes from the EWG 20-16 meeting made by the chairperson, a preliminary draft of the EWG 20-16 report, and related documents.

STECF comments

STECF notes that EWG 20-16 met to (i) evaluate amendments in Member States' national Work Plans under the Data Collection Framework (DCF) for the year 2021, (ii) evaluate two test Regional Work Plans and (iii) comment on the preparation of revised Work Plan/Annual Report templates & guidance.

In 2020, several STECF EWGs using DCF data (provided by data calls) were postponed due to the Covid-19 pandemic, and for this reason, the EWG did not evaluate Data Transmission Issues as in previous years.

Evaluation of amended national DCF Work Plans 2021

The Work Plans describe the planning of data collection at national or regional level. Member States are requested to submit any amendment of their national Work Plans to the Commission within the legal deadline of 31 October of the preceding year of the implementation. STECF notes that eleven Member States submitted amended national Work Plans for the year 2021. The amendments covered all sections of the Work Plans.

Member State	Commercial catches 1ABC	Recreational fisheries 1D	Diadromous species 1E	By-catches 1F	Surveys 1G & 1H	Fishing activity 2A	Fleet econ. 3A	Aqua-culture 3B	Proces-sing ind. 3C	Sampling plans 4A-D	Data quality (biological) 5A	Data quality (economic) 5B	Data availability 6A	Meetings 7A	Recommen-dations 7B	bilaterals 7C
BGR						X								X		X
CZE			X					X				X	X	X		
ESP		X	X	X	X		X	X	X	X				X		
FRA	X		X	X	X		X	X	X	X	X			X	X	X
HRV	X				X	X				X	X	X	X	X		
IRL		X	X	X	X		X			X	X			X	X	X
LTU	X		X			X	X			X	X					X
LVA	X		X	X	X	X	X	X	X	X						X
MLT	X				X	X	X	X	X	X			X			X
PRT	X	X		X	X	X				X	X	X	X	X	X	
SWE			X	X	X			X		X	X			X	X	X

During the EWG, six Member States were contacted to update or clarify issues (marked as orange in the table). Nevertheless, all amended work plans were successfully evaluated at the end of the meeting and there were no outstanding issues to be followed up bilaterally between a Member State and the EU Commission after the finalisation of the meeting.

STECF notes that the EWG used the same evaluation criteria and evaluation sheets for the evaluation of the amended WPs as the previous EWGs on WP evaluation (EWGs 16-16, 17-13, 18-18 and 19-18).

STECF notes that the quality of the sections of the resubmitted Work Plans had improved from previous years (e.g. by clearly addressing STECF comments) and that most Member States used the instructions from EWG 19-18 on how to amend the work plan correctly. However, some issues still persisted and were resolved during the EWG:

- Biological data from sampling commercial fisheries: Nine Member States amended their WPs regarding this section. Overall, the Member States that resubmitted a Work Plan for this section addressed the comments and recommendations from previous year's evaluation (EWG 19-18).

- Recreational fisheries and diadromous species: Eight Member States amended their Work Plans regarding these sections. In most cases, the submitted amendments were minor updates of text and tables.

- Incidental by-catch and Pilot Study 2: Six Member States amended their Work Plans regarding this section. One Member State added a pilot study on the level of fishing and impact of fisheries on biological resources and marine ecosystem in a new ICES area. Another Member State changed the seasonality of the sampling scheme in their Pilot Study 2 on stomach contents due to administrative problems and Covid-19. For the rest, only small alterations and editorial changes were made.

- Research surveys at sea: Eight Member States amended their Work Plans regarding this section. One minor issue regarding changing survey name arose and was solved with the concerned Member State during the EWG. The remaining amendments included small alterations and some editorial changes.

- Fishing activity, economic and social data: Eleven Member States amended their Work Plans regarding this section. In general, the amended economic sections were of high quality and only minor issues were found.

As in previous advice (STECF PLEN 14-02, 14-03, 15-02, 16-02, 17-02, 17-03, 18-02, 19-03, 20-02) STECF reiterates that an online reporting platform, connected to a database containing information on fisheries and the planning and implementation of sampling, would be a more efficient way to monitor the execution of Member States' Work Plans.

Parts of the existing databases from data calls (e.g. fleet economic data) and regional databases could be utilised for the purpose of providing overviews on fisheries and sampling effort by Member States.

Evaluation of Regional Work Plans

The EWG conducted a first test evaluation of two draft Regional Work Plans. The plans were submitted to the Commission by the Regional Coordination Groups for the Baltic Sea (RCG Baltic) and for the North Atlantic, North Sea & Eastern Arctic (RCG NANSEA). The Regional Work Plans included the sections on biological data collection (fisheries, surveys) and international/regional coordination.

STECF observes that the EWG provided comments on the approach and procedure but also detailed comments of the proposal by section. STECF further notes that the outcome of the evaluation of the test Regional Work Plans will be submitted to the RCGs for consideration in their intersession groups and for their June 2021 meeting. During that meeting, the RCGs are tasked to develop a full-scale Regional Work Plan of three years to be submitted to the Commission for adoption as a legal act.

STECF observes that even though the deadline of National Work Plans is clearly stated in the legal text the deadline for Regional Work Plans by the RCG is not yet defined.

Preparation of Work Plan and Annual Report templates and guidance

In September 2019 and in parallel with the finalisation of the ongoing revision of the European Union multiannual plan for the collection and management of data in the fisheries and aquaculture sectors (EU MAP), a revision of the templates for Work Plans and Annual Reports started. STECF notes that the EWG 20-16 reviewed the outcomes from an ad-hoc drafting group that had been tasked to review the templates and guidance text.

STECF notes that the EWG provided detailed comments by sections as well as provided some general conclusions. The outcome of the EWG will form the basis of the EWG 20-18 that is dedicated to finalising the templates and guidance for the Work Plans and Annual Reports.

STECF conclusions

STECF endorses the outcomes of the EWG 20-16 presented by the chairperson during the STECF PLEN 20-03. The final EWG report was not yet available at the time of the PLEN 20-03 meeting.

STECF concludes that overall, the quality of the resubmitted Work Plans has improved from previous evaluations and most Member States that resubmitted a Work Plan addressed the comments and recommendations from previous evaluation (EWG 19-18). There were, however, still minor issues caused by for example Member States not following the guidelines fully.

STECF concludes that the evaluation of the two test Regional Work Plans were successful. However, a follow-up in the RCGs (intersession groups) is needed before a full assessment can be performed.

STECF concludes that a full commitment of Member States concerned to change their national Work Plans in line with the proposals of the RCGs is crucial. Furthermore, deadlines for the Regional Work Plans need to be set within a time frame which allows that any

changes of the Regional Work Plans can be implemented in the National Work Plans in time.

STECF concludes that the preparatory work carried out by ad-hoc contracts as regards the revision of Work Plans and Annual Report templates and guidelines have been very useful and will, together with the outcome of EWG 20-16, allow for the finalisation of the revision during EWG 20-18.

Finally, STECF would like to further stress the need of an online reporting platform, in connection with a database, for the planning and implementation of Work Plans, on both Member States' and regional level.

6. ADDITIONAL REQUESTS SUBMITTED TO THE STECF PLENARY BY THE COMMISSION

6.1. Joint Recommendations on directed fishing in South Western Waters (South Western Waters Member States Regional Group) and in the Mediterranean (ADRIAMED, SUDESTMED and PESCAMED Member States regional groups) (Art. 27.3 of Regulation (EU) 2019/1241)

Background provided by the Commission

The entry into force of Regulation (EU) 2019/1241, the Technical Measures Regulation (TMR), introduced the process of regionalisation to amend certain regional baseline selectivity standards. Member States with a direct management interests in a given region may propose to adapt various aspects of fisheries management (including selectivity standards) to cater for regional specificities, while ensuring that their proposals are consistent with the objectives proposed by the TMR and at least as selective as the baseline it sets, in particular in terms of exploitation patterns and the level of protection provided for sensitive species and habitats (Art. 15.4 of TMR).

Article 6(3) of the Regulation includes a certain definition of 'directed fisheries': "'directed fishing' means fishing effort targeted at a specific species or group of species and may be further specified at regional level in delegated acts adopted pursuant to Article 27(7) of this Regulation".

Article 27.7 of that regulation provides for further definition of 'directed fishing' to be fixed in a Commission delegated act following a joint recommendation from the relevant Member States concerning the relevant species in Part B of Annexes V to X and A of Annex XI.

The baseline mesh size to be used is set in part B, points 1.1 and 2.1 of the Annexes V-VIII listed, and point 1 of Part B of Annex IX. However, it is possible to derogate from this baseline under the conditions set in the subsequent points in these Annexes. Each derogation from the baseline mesh size indicated in the table includes the term 'Directed fishing', which pursuant to article 27.7 it may be further defined through joint recommendations by regional groups.

However, the definition of 'directed fishing' needs to be established to ensure that the conditions associated with each mesh size can be monitored and controlled.

Since the entry into force of the TMR, the Member States' Regional Groups have been invited to work on this matter. The following Regional Groups have submitted a joint recommendation, currently to be assessed by STECF: South Western Waters, ADRIAMED, PESCAMED and SUDESTMED. The MEDAC also issued an ad hoc advice.

Acknowledging the difficulty of the task, this topic was also discussed during PLEN 20-02, and an ad hoc contract was commissioned with the aim of helping PLEN 20-02. Its conclusions need to be taken into account in this request, where the STECF concluded that the extent to which a proposed definition of "directed fishing" will further or hinder the achievement of the objectives of the Common Fisheries Policy and of the TMR, particularly with respect to optimising exploitation patterns (Article 3(2)(a) of TMR) depends on the combined effects of three elements:

1. The selectivity of the gears proposed for the directed fishery compared to the baseline gear in the TMR, both for the targeted species and for the species to be avoided;
2. The conditions for granting the derogation to use the proposed gear(s), and the proportion of the fleet that will be entitled to use them depending on catch threshold; and
3. Whether the combination of 1) and 2) will help to achieve the CFP MSY objectives, minimise unwanted catches and avoid discarding, and reduce the fishing impact on the seafloor habitats and the ecosystem.

Background documents are published on the meeting's web site on: https://stecf.jrc.ec.europa.eu/plen2003

Request to the STECF

Based on the conclusions of STECF PLEN 20-02 and its preparatory ad hoc contract, the STECF is requested to assess whether and to what extent the joint recommendations sent by the SWW and Mediterranean Member States groups and setting out the specifications of Article 27.7 and in Part B of Annexes V to XI of Regulation (EU) 1241/2019:

I. Could lead to a deterioration of selectivity standards and to what extent in particular in terms of an increase in the catches of juveniles, existing on 14 August 2019 (date of entry into force of TMR);
II. Would help achieve the objectives and targets set out in Articles 3 and 4 of TMR;
III. The information provided for each sea basin is sufficient or whether it is possible to identify complementary information allowing for a complete analysis.

The Member States provided the data and information to demonstrate that the three elements listed above (STECF conclusions 20-02) have been taken into account in the definition proposed for 'directed fishing' and the definition can be justified based on such data and information. This also includes providing corresponding datasets of individual logbook and sea-sampling trip data that are needed to assess the robustness and the impact of the catch composition threshold.

Where the data provided information is not sufficient, the STECF is requested to identify what information and data should be provided in order for a complete assessment.

IV. The STECF should further assess the implications of the Member State groups' joint recommendations for other policies, mainly the compatibility with the landing obligation (Article 15 Common Fisheries Policy) and other technical regulations.

Summary of the information provided to STECF

STECF PLEN 20-03 was provided with four documents submitted by the High-Level Groups (HLGs) of the South-Western Waters (SWW), ADRIATICA, PESCAMED and SUDESTMED. The four joint recommendations (JRs) are aimed at defining directed fishing in accordance with Article 27.7 of Regulation (EU) 2019/1241. Article 27.7 states "The Commission is empowered to adopt delegated acts pursuant to Article 15 and in accordance with Article 29 to further define the term 'directed fishing' for relevant species in Part B of Annexes V to X and Part A of Annex XI. For this purpose, Member States having a direct management interest in the fisheries concerned shall submit any joint recommendations for the first time not later than 15 August 2020." Parts B of Annexes V to X and part A of Annex XI of Regulation (EU) 2019/1241 contain specifications for permitted mesh sizes in different regions, specifying for each region a baseline mesh size for fixed and towed gears and permitted deviations from such baselines provided certain conditions are met.

Each permitted derogation from the baseline mesh size indicated in the table includes the term 'Directed fishing ', which is not explicitly defined. However, pursuant to article 27.7 it may be further defined through joint recommendations by regional groups.

The JRs provided by the HLGs aim to define the term directed fishing in the context of the mesh sizes set out in the Regulation. The JRs only contain proposed catch thresholds for defined fisheries already included in the relevant Annexes to the Technical Measures Regulation. No new exemption or derogation from the mesh sizes set up in these Annexes (i.e. Annex VII for SWW and Annex IX for the Mediterranean) are requested.

SWW

The SWW HLG provided two tables (Annex I and Annex II) aimed at replacing the table in Part B, point 1.2, and the table in Part B, point 2.2, of Annex VII to Regulation (EU) 2019/1241. The only difference with the original table is the addition of new percentage catch thresholds. The new tables are reported below:

Annex I – Towed Gears

Mesh size6	**Geographical areas**	**Conditions**	**Definitions of "directed fishing" included in the JR**
At least 55 mm	Whole area excluding ICES division 9a East of longitude 7°23'48" W	Directed fishing for species not subject to catch limits and which are not covered elsewhere in the table	Minimum 60%
		Directed fisheries for red sea bream	Minimum 30%
		Directed fishing for mackerel, horse mackerel and blue whiting with bottom trawls	Minimum 30%
At least 35 mm	Whole area	Directed fishing for wedge sole	Minimum 30%
At least 55 mm	ICES division 9a East of longitude 7°23'48" W	Directed fishing for crustaceans, included rose shrimp (*Parapenaeus longirostris*)	Minimum 30%
At least 16 mm	Whole area	Directed fishing for small pelagic species which are not covered elsewhere in the table	Minimum 80%

6 The mesh sizes, geographical areas and conditions are taken directly from Annex VII Part B of Regulation (EU) 2019/1241.

		Directed fishing for shrimps (*Palaemon serratus*, *Crangon crangon*), and crab (*Polybius henslowi*)	Minimum 30%
Less than 16 mm	Whole area	Directed fishing for sandeel	Minimum 90%

Annex II – Static Gears

Mesh size	**Geographical areas**	**Conditions**	**Definitions of "directed fishing" included in the JR**
At least 80 mm	Whole area except ICES division 8c and ICES subarea 9	Directed fishing for sea bass, whiting, turbot, flounder and pollack	Minimum 50%
At least 60 mm	Whole area	Directed fishing for species not subject to catch limits and which are not covered elsewhere in the table	Minimum 30%
At least 50 mm	Whole area	Directed fishing for small pelagic species (except sardine) which are not covered elsewhere in the table	Minimum 70%
At least 40 mm	Whole area	Directed fishing for red mullet, shrimps (*Penaeus* spp.), mantis shrimp, wedge sole and wrasse	Minimum 40%
Less than 40 mm	ICES subarea 9a	Directed fishing for sardine (*Sardina pilchardus*)	Minimum 50%

The proposed directed fishing for sardine in the table provided by the SWW (HLG) JR supplements the directed fisheries for small pelagics already listed in Table 1 of Annex VII Part B. However, as with the other thresholds proposed, this is not a new directed fishery as this gear is already included as a derogation to the baseline mesh sizes in the TMR.

<u>Mediterranean</u>

The three Mediterranean HLGs provided JRs specifying the definition of directed fisheries for anchovy and sardine using trawl nets and the definition of directed fisheries for red sea bream with static nets (Table at Point 1 of Part B, and Point 6 of Part C of Annex IX of the Regulation (EU) 2019/1241, respectively):

- directed fishery of anchovy (*Engraulis encrasicolus*) and sardine (*Sardina pilchardus*) with trawl nets means a fishery where these species account for at least 80% of the catch in live weight after sorting;
- directed fishery of red sea bream (*Pagellus bogareveo*) means a fishery where the catches of this species represent at least 20% of the catches in live weight.

These JRs correspond to the MEDAC Opinion No 60/2020 of 28 February 2020 (Annex A), which reiterates the information on directed fisheries included in Regulation (EC) 1967/2006 should be applied.

Additionally, in the case of the three Mediterranean JRs, as with the SWW, no new derogations from the baseline mesh sizes established in the TMR are requested.

STECF observations

STECF notes that the four joint recommendations provided by the HLGs SWW, ADRIATICA, PESCAMED and SUDESTMED aim at providing thresholds to further define and specify directed fishing. They do not represent new derogations from the baseline mesh sizes established in the TMR

STECF notes that most of the thresholds proposed in the JRs are not new thresholds, but rather derived from the existing thresholds prevailing in technical regulations in place before the implementation of Regulation (EU) 2019/1241. The JRs sent by the Mediterranean HLGs refer to the MEDAC Opinion No 60/2020 of 28 February 2020 (Annex A) which reiterates the thresholds set out in Art. 9 points 4 and 6b of Regulation (EC) 1967/2006 (Mediterranean regulation). Some of the thresholds proposed in the SWW JR are derived from the catch composition that existed previously in Annex II of Regulation (EC) 850/98, which were based around catch composition rules applying to long lists of species. In the case of sandeel with towed gears, the catch thresholds proposed are the same.

STECF notes that no data or evidence supporting the justification for these thresholds, either reiterating previous regulations or not, is proposed in the JRs. Therefore, STECF cannot carry out any evaluation of the appropriateness of the proposed thresholds to define the respective fisheries. For a full evaluation of the proposed thresholds, STECF requires information from the HLGs on catch composition information that supports the proposed thresholds and the numbers of vessels that will avail of the derogation supported by the threshold.

STECF notes that no means to monitor and control these thresholds are specified in the JRs and it is not clear how these thresholds would apply in the context of the landing obligation, under which all catches must be landed. There is no indication of the measures to be taken to prevent the thresholds not being reached on a regular basis by an individual vessel or multiple vessels.

STECF notes that the available information is not sufficient to assess whether and to what extent the JRs sent by the SWW and Mediterranean HLGs would help achieve the objectives and targets set out in Articles 3 and 4 of TMR.

STECF observes that the selectivity of the gears is not relevant for these JRs as the thresholds relate to derogated gears already included in the Technical Measures Regulation. STECF assumes that the very fact these derogations are included in the Regulation means they have been accepted as legitimate derogations. However, STECF observes that the outcomes of recent H2020 projects MINOUW and DISCARDLESS as well

as selectivity studies carried out by Member States and under ongoing EU projects (e.g., IMPLEMED project "Improving the selectivity of trawl gears in the Mediterranean Sea to advance the sustainable exploitation pattern of trawl fisheries", Framework Contract EASME/EMFF/2016/032) could contribute to identifying suitable selectivity measures and devices, over and above the derogations included in the JRs for Mediterranean fisheries. These studies focus on the experimentation of selectivity and by-catch reducing devices such as sorting grids and T90 codend. The uptake of such measures and devices would lead to improvements in the size and species selectivity of directed fisheries without negatively affecting catches. STECF observes they represent the basis to support further work towards the request of derogations from baseline gears in Mediterranean fisheries in the future.

STECF conclusions

STECF concludes that information provided is not sufficient to allow an evaluation of the consequences of the thresholds proposed in the JRs sent by SWW, ADRIATICA, SUDESTMED and PESCAMED HLGs on the objectives and targets set out in Articles 3 and 4 of the TMR 2019/1241.

STECF reiterates the conclusions of PLEN 20-02 on the type of data and information that would facilitate a complete assessment of whether the proposed thresholds make sense with regards to catch composition patterns and number of vessels involved. This includes providing corresponding datasets of individual logbook and sea-sampling trip data that are needed to assess the robustness and the impact of the catch composition threshold. Information on the likely numbers of vessels that avail of these exemptions would also be required.

STECF concludes that as no means to monitor and control these thresholds are specified in the JRs, it is unclear how these thresholds could be implemented in the relevant fisheries. It is also unclear as to how these thresholds would apply in the context of the landing obligation, under which all catches must be landed.

6.2 Assessment of the potential impact on the exploitation pattern of species by-caught in the Norway Pout fishery with an alternative species selective device

Background provided by the Commission

The new Technical Measures Regulation (TMR)7 introduces the process of regionalization to amend certain regional baseline selectivity standards. Member States with interests in a given region may adapt various aspects of fisheries management, while ensuring that activities carried out are consistent with the objectives of the TMR. This permits the tailoring of detailed and technical rules so as to take into account regional specificities.

In this regard, the Scheveningen Regional Group has previously developed the attached joint recommendation in accordance with article 15 of the TMR and article 18 of Regulation EU no 1380/2013. This joint recommendation was assessed by the STECF (PLEN 20-01/PLEN 20-02) in order to determine to what extent it goes in line with achieving the objectives and targets set out in Articles 3 and 4 of the TMR, and does not lead to a deterioration of selectivity standards.

Previous STECF (PLEN 20-01) evaluations identified a number of data and information gaps that prevented a positive assessment that the alternative gear fulfilled the criteria set out in TMR article 15. The majority of these have been resolved (PLEN 20-02). However, STECF raised additional concerns (PLEN 20-02) regarding the potential for the excluder to increase catch rates of by-catch species particularly if the length was below 15cm. The Scheveningen Regional Group has supplied additional data and information to redress the concerns expressed by the STECF on this particular point with a view to permitting the use of the excluder trawl as an alternative to the selection grid specified in annex V of the TMR.

Specifically, STECF concluded that "*the Excluder design shows substantial (and statistically significant) reduction (30-95% in number depending on species) in bycatches of larger individuals of herring, mackerel, whiting, long rough dab and witch flounder compared with the currently required grid design. More specifically bycatches larger than 21-26 cm (whiting, herring and mackerel) and 15-17 cm (long rough dab and witch flounder) were significantly reduced by numbers*."

However, STECF also concluded "*that for Norway pout and for comparable bycatch species of similar size and morphology (e.g. gadoids smaller than 15 cm) the Excluder design can be expected to result in increased catches of around 32% by numbers (CI: 3-95%)*".

7 Regulation (EU) 2019/1241 of the European Parliament and of the Council of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, amending Council Regulations (EC) No 1967/2006, (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005

The Danish authorities have provided additional information regarding the observed length frequency of the by-catch species typically encountered in the fishery and length frequency data from experiments comparing the grid and excluder device. From the comparative selectivity experiments, it appears that there is a substantial length dependent reduction in by-catches associated with the excluder. Given the typical length distribution encountered in the fishery and the experimental data comparing the relative selectivity at length between grid and the excluder, the excluder may present an alternative to the grid that could provide a positive change in the exploitation pattern for the by-catch species.

Background documents are published on the meeting's web site on: https://stecf.jrc.ec.europa.eu/plen2003

Request to the STECF

On the basis of Article 15(4) (5) and (6) of the TMR, STECF is requested to evaluate the additional information supporting the joint recommendation on the use of the "excluder" grid device in the Norway Pout fishery in the North Sea. STECF should assess to what extent the joint recommendation helps at achieving the objectives and targets set out in Articles 3 and 4 of the TMR for by-catch species encountered in the fishery.

More specifically, STECF advice is requested to assess, in particular:

- Based on the additional data provided, if the excluder achieves or improves upon the by-catch reduction rates compared to the grid across the length distribution typically encountered in the fishery and if the use of the excluder would maintain or improve the exploitation pattern of the by-catch species.

Documentation: Joint recommendation of the Scheveningen Group: Use of the 'Excluder' grid in the Norway pout fishery; Length frequency data from experimental trials comparing the length specific performance of the excluder device and grid and length data of by-catch species obtained from national catch sampling programmes.

Summary of the information provided to STECF

Three documents were provided to PLEN 20-03 to support this request:

(a) an updated version of the scientific manuscript underpinning the JR "A netting-based alternative to rigid grids in the small-meshed Norway pout (*Trisopterus* 1 *esmarkii*) trawl fishery" by Eigaard et al. A previous version of the manuscript was evaluated and summarized by PLEN 20-01 and PLEN 20-02.

(b) An excel file " DK harbor sampling NOP fishery_ 4A_Q4_2012-2020_STECF_ ver2.xlxs" consisting of catch composition data in the Danish Norway pout fishery. This provides data on commercial catches that is representative of the fishery and comparable to the experiment by Eigaard et al. The submitted dataset consists of sampled landings from the North Sea during the 4th quarter of the years 2012 to 2019 (i.e. since the sorting grid was introduced in the Norway pout fishery). More specifically, the information consists of a subset of samples of industrial landings performed by the Danish Control Agency. As the

regular control samples only measure catch composition (assuming that all catches are landed) by weight, the subset provided to PLEN 20-03 were the part of the samples that are regularly analysed further by DTU Aqua (e.g. otoliths reading and length measurements). Each sample consists of approx. 5 kg of unsorted landings. Data is recorded on the numbers at length and weights of all species from 136 sampled trips for the years 2012 to 2019.

An overview of the provided information is presented in Table 6.2.1 (weight composition per species) and 6.2.2 (length frequency per species).

Table 6.2.1. Catch proportion (by weight) in the Norway pout fishery. Danish landing sampling data 2012-2019. The table was constructed by STECF on data provided in supporting document b.

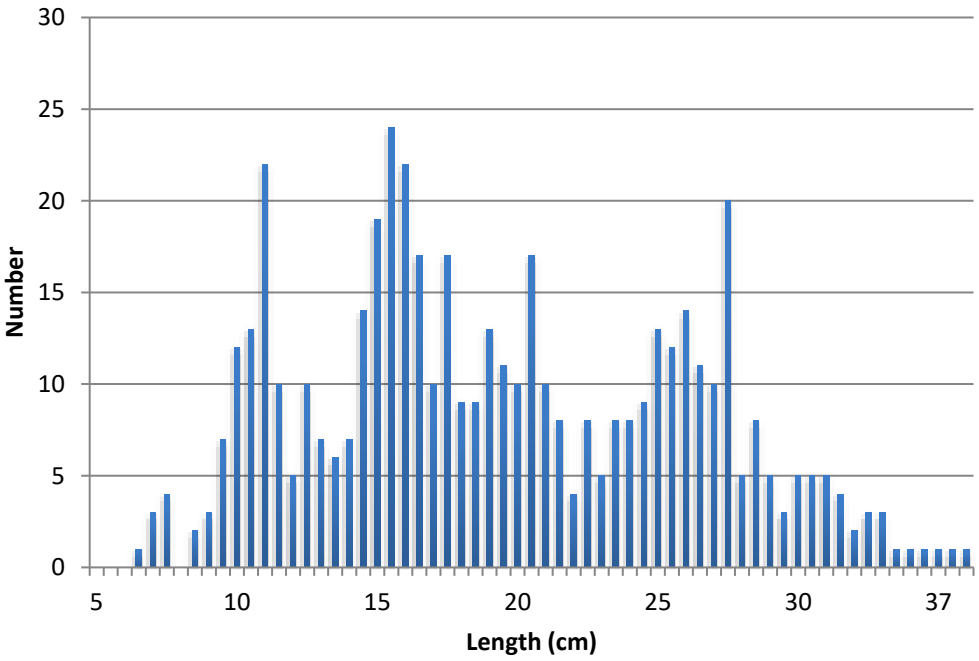
Species/Year	2012	2013	2014	2015	2016	2017	2018	2019	Average
Norway Pout	96,93 %	99,26 %	97,91 %	99,62 %	99,64 %	100,00 %	99,77 %	99,36 %	99,06 %
Herring	2,59%	0,26%	0,11%	0,03%	0,14%	0,00%	0,00%	0,20%	0,42%
Whiting	0,20%	0,15%	0,30%	0,07%	0,06%	0,00%	0,22%	0,21%	0,15%
Blue whiting	0,03%	0,00%	1,35%	0,03%	0,00%	0,00%	0,00%	0,00%	0,18%
Lesser silver smelt	0,11%	0,14%	0,23%	0,09%	0,06%	0,00%	0,01%	0,18%	0,10%
Long rough dab	0,09%	0,02%	0,04%	0,05%	0,05%	0,00%	0,00%	0,00%	0,03%
Northern shrimp	0,03%	0,05%	0,02%	0,06%	0,02%	0,00%	0,00%	0,01%	0,02%
Haddock	0,00%	0,05%	0,02%	0,00%	0,00%	0,00%	0,00%	0,02%	0,01%
Cod	0,00%	0,03%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Silvery cod	0,00%	0,01%	0,00%	0,03%	0,01%	0,00%	0,00%	0,00%	0,01%
Hake	0,02%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Other species	0,01%	0,03%	0,03%	0,03%	0,02%	0,00%	0,00%	0,01%	0,01%

Table 6.2.2. Number of length measured individuals of all species encountered in Danish landing samples from the Norway pout fishery 2012-2019. Also shown is the number of samples per year. The table was constructed by STECF on data provided in supporting document b.

Species/Year	2012	2013	2014	2015	2016	2017	2018	2019	Total
Norway Pout	4655	5956	4324	1738	5119	269	1412	4732	28205
Herring	89	21	3	1	10			8	132
Lesser silver smelt	29	30	12	8	8		1	17	105
Blue whiting	5		84	0					89
Whiting	10	12	4	10	5		3	13	57
Long rough dab	14	10	7	6	11			1	49
Silvery cod	2	32		5	5			2	46
Haddock		2	4	1				5	12
Pouting			10						10
Hake	4		0		1				5
Witch flounder	1		3						4
Sprat		2						1	3
Poor cod		3							3
Cod		2							2
Fourbeard rockling	1								1
Horse mackerel				1					1
Dab					1				1
Hagfish		0		1	0			0	1
Sum all species	4810	6070	4451	1771	5160	269	1416	4779	28726
No. Sampled trips	*33*	*40*	*16*	*10*	*22*	*1*	*3*	*11*	*136*

Table 6.2.1 and 6.2.2 show clearly that Norway pout dominates the catch samples both in weight and by numbers (99.1% and 98.2% respectively). Overall bycatches are sparse and consist of less than 20 fish species in total over the years. Due to the scarcity of

bycatches, analyzing yearly species-specific length distributions is not feasible. The length frequency of all bycatch species combined for all years is shown in Figure 6.2.1.



Figure

Figure 6.2.1. Length distribution of all bycatch species combined in Danish landing samples from the Norway pout fishery 2012-2019. The figure was drawn by STECF on data provided in supporting document b.

Of the 498 length measured bycatch species in the samples from the 136 sampled trips (Figure 6.2.1.), 125 individuals (25 %) were smaller than 15 cm, thus on average less than one individual of any bycatch species per sampled trip. Table 6.2.3. shows the number per species of the bycatches smaller than 15 cm.

Table 6.2.3. Number of individuals per bycatch species smaller than 15 cm in Danish landing samples from the fishery for Norway pout 2012-2019. The table was constructed by STECF on data provided in supporting document b.

Species	Number
Long rough dab	33
Blue whiting	28
Whiting	24
Silvery cod	23
Lesser silver smelt	11

Pouting	10
Haddock	8
Sprat	3
Witch flounder	3
Dab	1
Cod	1

(c) This document "NOP Excluder versus grid trial length data by haul_STECF_ver2.xlsx" provided all sampled data of all species from the experimental trial presented in document (a) (Eigaard et al.). Data was presented haul-by-haul and included length distributions of all species and haul details (location, depth, environmental variables etc.).

STECF comments

The STECF comments focus on the new information provided in response to the request for additional information by the Commission to the Scheveningen group. They follow from the evaluations by PLEN 20-01 and PLEN 20-02. Specifically, STECF focused here on the question of the ToR to PLEN 20-03 "*based on the additional data provided, if the excluder achieves or improves upon the by-catch reduction rates compared to the grid across the length distribution typically encountered in the fishery and if the use of the excluder would maintain or improve the exploitation pattern of the by-catch species*".

STECF notes that the main point raised from previous evaluations was the applicability of the results of the Eigaard et al. study to the effects on bycatch species in the wider fishery. Specifically, this relates to the identified increase in catch efficiency of smaller (<15 cm) individuals when using the Excluder compared to the grid. PLEN 20-02 concluded that the evidence presented suggests that the Excluder design will improve selectivity for bycatches larger than 15-20 cm but likely reduce selectivity for bycatches smaller than 15 cm. The latter conclusion was inferred from the reduced selectivity for Norway pout smaller than 15 cm. These conclusions were the background to why PLEN 20-02 could not fully evaluate whether the Excluder device is compatible with the objectives of Regulation (EU) 2019/1241. As bycatches smaller than 15 cm were limited or absent in Eigaard et al., this raised the question whether the lack of small-sized bycatches in the study is representative for the wider fishery or not.

PLEN 20-01 and 20-02 reviewed the revised version of the manuscript (Eigaard et al.), supplemented as document (a). The changes in this latest version provided to PLEN 20-03 are of cosmetic nature and not in substance. Therefore, the document was not reevaluated by STECF.

Similarly, STECF considers that the information provided in document (c) was of limited relevance for the request to PLEN 20-03 because the remaining question was focused on

the applicability of the study results on smaller bycatches in the wider fishery as such information was largely lacking in Eigaard et al. Previous evaluations by PLEN 20-01 and PLEN 20-02 had already evaluated the quality and robustness of the study itself.

STECF notes that document (b) provided such catch composition data from the commercial fishery. The sampling procedure comprised a single sample (around 5 kg) taken from each sampled trip, which is also acknowledged in document b. STECF considers that the main limitations with this sampling design is the potential bias in terms of representativeness of one small sample from a large, naturally size-sorted catch and the low probability that rare species or larger sized individuals will at all be included in a small sample. However, as the intermixture of smaller sized bycatch species (similar size as Norway pout) is of main interest here, these limitations probably have minor implications given the quite large number of samples collected over time. STECF considers that indeed this large number of samples to be the main strength of the data provided (samples of landings from 136 trips covered between 2012 and 2019), i.e. since the current grid was introduced in the fishery.

STECF further notes that bycatches are limited in the unsorted landing samples provided from the Norway pout fishery. In total, 1.8% of all individuals in the samples consisted of species other than Norway pout. Among these species, the most common are quota species such as herring, blue whiting, whiting and argentine. Few cod, haddock, hake and sprat were recorded. As the number of individuals of the bycatch species in the whole dataset was very small, up to 132 individuals for herring but more typically less than 20, it makes no sense to analyze the length frequencies by species by year in detail. Of all bycatch species recorded, 25 % were smaller than 15 cm and around 50% larger than 20 cm.

STECF notes that this information provides a better prediction of the possible effects of the Excluder. As PLEN 20-02 concluded that bycatches larger than 15 to 20 cm (depending on species) will be significantly reduced and bycatches smaller than 15 cm may increase, STECF considers that if the dominance of larger sized bycatches and the smaller proportion of small bycatches in the samples are representative of the wider fishery, the use of an Excluder would achieve an overall reduction in bycatch rates (in weight and number) in comparison to the grid for most species caught.

Consequently, STECF observes that the exploitation pattern of bycatch species is likely to be maintained or improved. This based on the modest proportion (25%) of bycatches smaller than 15 cm in combination with the limited predicted increase in catch efficiency (32%), compared to the larger reductions (from 30 % up to 95% depending on size class) for the larger share of bycatches above 15 to 20 cm. This is particularly relevant for bycatch species that tend to grow larger than Norway pout and that are normally classified as juveniles up to over and above 25 cm in length. For smaller species with L-infinity of less than 15 cm this may not hold true. However, the scarcity of bycatches in the data provided indicates that the Norway pout fishery has a limited impact on most bycatch stocks.

STECF conclusions

- *if the excluder achieves or improves upon the by-catch reduction rates compared to the grid across the length distribution typically encountered in the fishery and if the use of the excluder would maintain or improve the exploitation pattern of the by-catch species.*

STECF concludes that the risk of increased catches for comparable bycatch species of similar size and morphology (e.g. gadoids smaller than 15 cm) the Excluder design, as identified by PLEN 20-02, is low. This is evidenced by both a low percentage by weight (less than 2%) and a low number of individuals in the catches and that among these, individuals smaller than 15 cm constitutes only a small proportion. Most of the bycatches in the fishery are larger than 15 cm and will hence be substantially reduced with the Excluder.

STECF concludes that the use of an Excluder device will likely result in reduced bycatch rates (in weight and number) and a maintained or improved exploitation pattern for bycatch species that grow larger than Norway pout (e.g. such as gadoids) compared with the sorting grid.

6.3 Remedial measures for cod in the North Sea

Background provided by the Commission

Article 14 of COUNCIL REGULATION (EU) 2020/900 (the fishing opportunities regulation) introduced remedial measures to support the recovery of North Sea and Skagerrak cod. The regulation provides a number of options for Member States to use specific highly selective gears or as an alternative, for Member States to introduce alternative gears (Article 14.2(c)), provided it could be demonstrated that these alternatives result in at least a 30% reduction in cod catches compared to the legal minimum requirements set out in Regulation (EC) 2019/1241.

Furthermore, Member States, as an alternative to the selective gears above, can implement national cod avoidance plans to ensure that realised cod catches are in line with the intended catch as per national quota allocations. While it is unrealistic to expect a quantitative assessment of the cod avoidance plans at this stage, a qualitative assessment of the potential impact of these plans will help identify if further refinements may be required to meet the overarching objective.

Background documents are published on the meeting's web site on: https://stecf.jrc.ec.europa.eu/plen2003

Request to the STECF

The STECF is requested to:

1) Based on the supporting scientific information, assess whether the alternative gear designs proposed by Sweden meet the objectives of reducing cod catches by at least 30% compared to the current baselines set out in the technical measures regulation.

2) If the supporting scientific information provided by Sweden is insufficient, assess what further supporting information may be required.

3) Provide a qualitative assessment whether the measures contained in the national Danish and UK plans would help maintain cod catches in line with available quota. STECF should use previous experience in the assessment of the cod recovery plan (Regulation (EC) 1342/2008)) and other relevant reviews, e.g. Kraak *et al* (2013). Where considered appropriate, STECF should provide guidance on whether the plans would benefit from further refinement.

Summary of the information provided to STECF

STECF was provided with two documents:

- A document from Sweden pertaining to ToRs 1 and 2;
- A document from Denmark pertaining to ToR 3.

STECF was not provided with any document from the UK and thus ToR 3 will only be answered with regards to the Danish plan.

The following text will first deal with the Swedish proposal (ToRs 1 and 2) and then with the Danish proposal (ToR 3).

STECF Evaluation of the proposal from Sweden.

Summary of the information provided to STECF

The document comes from the Swedish University of Agricultural Sciences, Department of Aquatic Resources (SLU Aqua), and is entitled "*An assessment of the estimated reduction of cod catches by the introduction of an 120 mm square mesh codend as an alternative gear in the North Sea and Skagerrak*". Sweden proposes this alternative gear in the North Sea and Skagerrak under derogation b to Article 14.3 of COUNCIL REGULATION (EU) 2020/900 of 25 June 20208 that states:

b) a regulated and highly selective bottom trawl or seine is used, which results, according to a scientific study, in at least a 30 % reduction of cod catches compared to vessels fishing with the baseline mesh size for towed gears as specified in point 1.1 of Part B of Annex V of Regulation (EU) 2019/1241; such studies may be evaluated by STECF; in the case of a negative evaluation by STECF, these gears shall no longer be considered as valid for use in the areas defined in paragraph 2 of this Article;

The document provides analyses to investigate whether the proposed alternative gear reduces the cod catches by at least 30% in the North Sea and Skagerrak. The analyses follow the methodology that was previously applied by STECF to assess the effects of changes in selectivity in the Celtic Sea (PLEN-20-01). The method combines the selectivity curves of the baseline and alternative gears with the historical estimated cod population size distribution in the two areas. The study used DATRAS IBTS Q1 & Q3 data from 2000-2020 from the respective areas, to derive average size distribution of cod in the two areas. The selectivity parameters for the alternative gear are derived from Madsen (2007). The selectivity parameters for the baseline gear specified in Regulation 2019/12419 in the North Sea are derived from the model developed by Madsen and Ferro (STECF, 2003). For the baseline gear in the Skagerrak, two alternative scenarios were used. In one scenario, the selectivity parameters were obtained directly from covered codend experiments (Krag et al., 2016). In the other scenario, the selectivity curve was inferred from a catch comparison analysis of the baseline and a 120mm diamond mesh codend (Valentinsson and Wernbo, 2018).

During PLEN 20-03 and after exchanges with DG Mare and Sweden, STECF received additional information from SLU Aqua. This comprised a repeat analysis using population structure separately for each of the years 2000-2020 (rather than only for the average

8 Article 14.2: *Vessels fishing with bottom trawls and seines with minimum mesh size of at least 70 mm in 4a and 4b or at least 90 mm in 3a, and longlines shall be prohibited from fishing in Union waters of ICES division 4a, North of latitude 58° 30′ 00″ N and South of latitude 61° 30′ 00″ N and in Union waters of ICES divisions 3a.20 (Skagerrak), 4a and 4b, North of latitude 57° 00′ 00″ N and East of longitude 5° 00′ 00″ E.*

9 *The baseline mesh size for towed gears, as specified in point 1.1 of Part B of Annex V of Regulation (EU) 2019/1241, is 120 mm in the North Sea and 90 mm in the Skagerrak. However, when using a 90 mm in the Skagerrak the codend shall be constructed of four panels with a 3 m top sheet panel (so called SELTRA codend). The panel shall consist of 270 mm diamond mesh (or 140 mm square mesh) mounted at a position 4 to 7 m from the codline. Swedish vessels only use the diamond mesh alternative commercially.*

across those years), including the confidence intervals of the means across all years. This provides insights into the variation in percentage cod reduction over the 21-year period.

Based on the analyses, the predicted reductions in cod catches (by numbers) for trawls with a 120 mm square mesh codend compared to trawls with the baseline codends are 13.2%±2.6% (avg±95% CI) in the North Sea and 72.7±8.6% or 34.2±6.2%, from two scenarios in the Skagerrak. In the second scenario for the Skagerrak, in 6 out of 21 years, the estimated reduction in cod catches was less than 30%.

STECF observations about the proposal from Sweden

STECF considers that the provision of analyses separately by year with confidence intervals helped with the evaluation. Nevertheless, STECF considers that there is some remaining uncertainty about the results. For example, by using the population distribution averaged across all ICES rectangles in the restricted areas, it is tacitly assumed that all ICES rectangles are equally fished. However, some rectangles may in fact be more heavily fished than others, while the size distribution of cod may differ among the rectangles. Likewise, the selectivity estimates are assumed to represent the selectivity of the entire fishery in the relevant region, whereas they are point estimates derived from experiments carried out at a specific time and place.

STECF notes that the Swedish document reports reductions in cod catches in numbers of fish. The text of the regulation is not explicit about whether the reduction should be in numbers or weight, but staff from DGMARE confirmed to STECF that the reduction should be in weight.

According to the analysis, the alternative gear (120 mm square mesh codend) would, in the North Sea, lead to a 13.2%±2.6% (avg±95% CI) reduction in cod catches in numbers.

STECF notes that for the Skagerrak, the first analysis uses the results of Krag et al (2016), which is a comprehensive covered codend study of two versions of the baseline SELTRA trawl (one from a scientific trial and one measured when operated by the industry). The Swedish assessment chooses the version of the baseline which they believe is being used by the industry, but does not provide any evidence that this is the case. This is the least selective, and hence emphasises the relative benefit of any gear it is compared with. In addition, it appears that the selectivity estimates have not been applied correctly. The L_{50} and SR values supplied by Krag et al. are numerical estimates from a compound selectivity curve. The Swedish analysis, however, assumes they have come from a logistic ogive, which results in an overestimation of small fish, which predominate the population. This will put the baseline gear in a poor light and exaggerate the relative benefit of any gear compared with it. The second analysis uses the results of Valentinsson and Wernbo (2018), which is a catch comparison study of the baseline 90/270mm Seltra versus a 120mm diamond. The selectivity of the baseline is estimated by multiplying the catch comparison results by an estimate of a 120 mm diamond selectivity (from Madsen and Ferro in STECF, 2003). In fact, for cod > 30 cm the analysis does not use the mean catch comparison curve. It assumes the selectivity of the two gears is the same (for these fish) as they are not significantly different from each other. For cod < 30 cm, the analysis uses the lower 95% confidence curve. In both instances, these assumptions are likely to overestimate the selectivity of the baseline gear, which will make it more difficult to demonstrate the effectiveness of the proposed gear. While this analysis may underestimate the efficacy of

the proposed gear, there is no statistical analysis and no attempt to estimate confidence of the selection curve, which, if included, would increase the uncertainty around the estimated % change of cod catches.

In any case, for the Skagerrak, the two scenarios give different results. If the baseline selectivity is calculated according to Krag et al. (2016), the reduction in cod catches in the Skagerrak would be 72.7±8.6% in numbers. According to the by-year results, the reduction would have been at least 30% (in numbers) in all of the 21 years. But, as noted above, the chosen analysis exaggerates the relative benefit of any gear compared with it. In contrast, when using the method by Valentinsson and Wernbo (2018), the reduction would be 34.2±6.2%.The lower bound of the confidence interval is below 30% (in numbers). Furthermore, in 6 out of 21 years the estimated reduction is less than 30% (in numbers). There is no clear trend over the 21 years, but 4 of the 6 cases where the reductions are below 30% have been in recent years: 2014-2017. Here, as noted above, the chosen analysis makes it more difficult to demonstrate the effectiveness of the proposed gear. The true benefit of the proposed gear may lie somewhere in between; this is, however, too uncertain for STECF to conclude.

STECF response in relation to the TORs 1 and 2

ToR 1. Based on the supporting scientific information, assess whether the alternative gear designs proposed by Sweden meet the objectives of reducing cod catches by at least 30% compared to the current baselines set out in the technical measures regulation.

In the North Sea, based on the results provided, the alternative gear design proposed by Sweden does not meet the objectives of reducing cod catches by at least 30% compared to the current baselines set out in the technical measures regulation.

For the Skagerrak, STECF concludes that the supporting scientific information provided by Sweden is inconclusive and conflicting. STECF has also raised concerns on some methodological aspects of the study. Therefore, STECF is not able to respond to ToR 1 with regards to the Skagerrak..

ToR 2. If the supporting scientific information provided by Sweden is insufficient, assess what further supporting information may be required.

STECF considers that, for the Skagerrak, the supporting scientific information provided by Sweden is insufficient. In relation to the first analysis, there is a need to provide evidence in support of any argument as to why one gear was chosen over another. Further, in the event of one of these gears being chosen, any subsequent analysis should use the selectivity curves from the paper and not logistic approximations. In relation to the second, the variation related to the selectivity curves needs to be included in the analysis. Furthermore, STECF suggests that an alternative approach would be to carry out direct comparative trials of the proposed and baseline gears.

Finally, in all these analyses comparisons of bulk catch should be by weight rather than by numbers.

STECF conclusions about the proposal from Sweden

For the North Sea, STECF concludes that the alternative gear design proposed by Sweden does not meet the objectives of reducing cod catches by at least 30% compared to the current baselines set out in the technical measures regulation.

For the Skagerrak, STECF cannot conclude whether the alternative gear design proposed by Sweden meets the objectives of reducing cod catches by at least 30% compared to the current baselines set out in the technical measures regulation.

STECF Evaluation of the proposal from Denmark (STECF consulted the English translation provided).

Summary of the information provided to STECF

The Danish document comes from the Danish Ministry of Food and is entitled "*A national cod plan for the North Sea and Skagerrak*" and thus relates to derogation e of Article 14.3 of COUNCIL REGULATION (EU) 2020/900 of 25 June 2020:

e) vessels are subject to a national cod avoidance plan to sustain cod catches in line with the fishing mortality corresponding to the fishing opportunities set, based on scientific advice levels, through spatial or technical measures, or a combination thereof; such plans should be assessed no later than two months following implementation, by STECF in the case of Member States, and by their relevant national scientific body for third countries and where deemed necessary, further revised if such assessments consider that the objective of the plan will not be met.

According to the document, "*the aim of the Danish National Cod Plan is to ensure that catches from Danish demersal vessels operating in defined areas of the North Sea with bottom contacting gears from 70 mm and in Skagerrak with bottom contacting gears from 90 mm are kept within the fishing opportunities for cod in the North Sea and Skagerrak, in order not to exceed, but could continue to use, the allocated quota. In addition, in order to contribute to the recovery of the cod stock in the areas covered, the plan aims to reduce the mortality rate of juvenile cod (juvenile cod), i.e. below the minimum conservation reference size, which is 35 cm for North Sea cod and 30 cm for cod in the Skagerrak.*"

The document provides background information on Regulation (EU) 2020/900, the biological status of the cod stock, the Danish fishing opportunities for cod, the Danish demersal fisheries, the pool system of quota management in Denmark, discards and compliance with the landing obligation and then proceeds to list the supplementary measures for North Sea cod included in the Danish National Cod Plan.

According to the proposed Danish National Cod Plan, vessels shall be allowed to fish in the prohibited areas10 under the following conditions:

1. Vessels that demonstrate that they have used up less than 90 % of their cod quota and have at least 1 t or 2 t (for vessels of less than or over 24 m, respectively, in the North Sea) or 500 kg or 1 t (for vessels of less than or over 24 m, respectively, in the Skagerrak) quota left.
2. Vessels which do not have the required adequate quota left or vessels wishing to use more selective gear in the fishery of 120 mm or more must use one of the following gear to fish in the prohibited areas:
    a. trawls with a minimum lower belly mesh size of 600 mm;
    b. increased fishing line (0.6 m);
    c. 140 mm square mesh panel.
3. Vessels which do not have the required adequate quota left or vessels wishing to use more selective gear in the fishery with more than 70 mm in the North Sea and more than 90 mm in the Skagerrak, but less than 120 mm, must use one of the following gear to fish in the prohibited areas:
    a. Horizontal sorting grid with a maximum bar spacing of 50 mm separating flatfish and round fish, with an unblocked opening where round fish can escape;
    b. Seltra panel of mesh size of 300 mm (square meshes);
    c. Sorting grid with a maximum bar spacing of 35 mm, with an unblocked opening where fish can escape;
    d. Scaring floats
    e. Scaring lines
4. Vessels which have installed electronic monitoring equipment (cameras and sensors) for fully documented fisheries may also fish in the prohibited areas.
5. The Danish document further specifies derogation a11 of the Article 14 of the Regulation 2020/900. Vessels which, on the basis of logbook data, and for vessels under 10 metres through sales notes, can show that in the period 2017 - 2019 they have not caught more than 5 % of cod and that fish in certain specified fisheries where data indicate low cod catches, may apply for an exemption from the measures under the cod plan. Vessels fishing under this derogation shall thus be authorised to fish in accordance with this criterion before the start of the fishing trip. If a vessel does not comply with the criterion of a maximum of 5 % catches of cod per fishing trip, the vessel's authorisation may be withdrawn in accordance with detailed provisions laid down in the "*Order on measures to protect the cod stocks in the North Sea and Skagerrak*" and even subject to the possibility of a fine.
6. New gear will be developed, to be tested by several vessels at the same time and over a longer period of time: e.g. horizontal separator panels with large mesh release panels; topless Seltra trawls; Flip flap gear. The document does not clarify

10 Article 14.2: *Vessels fishing with bottom trawls and seines with minimum mesh size of at least 70 mm in 4a and 4b or at least 90 mm in 3a, and longlines shall be prohibited from fishing in Union waters of ICES division 4a, North of latitude 58° 30′ 00″ N and South of latitude 61° 30′ 00″ N and in Union waters of ICES divisions 3a.20 (Skagerrak), 4a and 4b, North of latitude 57° 00′ 00″ N and East of longitude 5° 00′ 00″ E.*

11 Derogation a of Article 14 of Regulation 2020/900: *The percentage of cod catches does not exceed 5 % of the total catches per fishing trip; vessels with cod catches that have not exceeded 5 % of their total catches in the period 2017-2019 are presumed to comply with this criterion provided that they continue to use the same gear which they used in that period; this presumption may be rebutted.*

whether vessels included in these tests are meant to be allowed to fish in the prohibited areas.
7. All the above requirements are suspended between 15-31 December 2020.

In addition, the Danish National Cod Plan proposes closures to protect areas where there is an estimated high abundance of juvenile cod. An area in EU waters to the north-west of "Revet" in Skagerrak, with a high abundance of juvenile cod, is closed. The area is an extension of the spawning closure provided for in EU legislation for the period 1 February to 15 March, however, unlike the spawning closure, the area does not include Norwegian waters. The Danish document provides figures showing that this area has a high prevalence of juveniles, especially in quarter 3.

The Danish National Cod Plan proposes to strengthen the monitoring, control and surveillance of vessels covered by the plan.

1. Commission Regulation 724/2010 laying down detailed rules for the implementation of real-time closures (RTC) of fisheries in the North Sea and Skagerrak sets out requirements for real time controls and real-time closures (RTCs); the RTCs are triggered by a threshold weight of juvenile cod. According to the Danish National Cod Plan, for the period from 15 August 2020 to 31 December 2020, the number of RTC checks shall be prioritised and targeted. To this end, a target of 25 RTC controls in the North Sea and Skagerrak during the period will cover fisheries with mesh sizes both above and below 120 mm in the North Sea and Skagerrak, but most of the controls will target trawls/Danish seines in the Skagerrak with a mesh size of less than 120 mm. The document provides information on the checks that were carried out in 2011-2019. A maximum of 45 checks was performed in 2011; the number of annual checks decreased to 6 in 2019 (with 0 in 2017). In case of insufficient catch to trigger a real time closure (200 kg), as per the requirements of Regulation 724/2010, a combined RTC and Last haul control are carried out to ensure a concrete output of the checks carried out. Vessels for RTC and Last Haul control will be selected based on a risk assessment, and the focus will be on vessels that can be expected to have a minimum of 200 kg of cod, haddock, whiting and saithe combined, which is the amount of fish needed to establish a real-time closure. Nevertheless, even smaller amounts of RTC and Last Haul samples will provide valuable information on the proportion of juvenile cod in the area.
2. The purpose of Last Haul inspections is to assess compliance with the landing obligation. However, as these separately make inventories of cod below the minimum reference size, it is also an important data source for assessing the amount of cod below the minimum reference size (MCRS) caught in commercial fishing. In 2020, the overall target number of Last haul inspections was originally planned at 200 inspections. Due to Covid-19, the target has been reduced to 120 Last haul inspections, only a small part of which is expected to be implemented in the Skagerrak and the North Sea. Last haul inspections shall be documented on a dedicated template developed by EFCA.
3. The document mentions the national requirement for haul by haul reporting and reporting of changes of fishing area. The Danish National Cod Plan does not propose anything new in this respect.
4. The document mentions control measures, including in relation to area closure, with VMS and AIS. The Danish National Cod Plan does not propose anything new in this respect.
5. The document mentions that, as of 1 July 2020 and for the remainder of the year, Norway has decided to close three areas in Norwegian waters. Danish vessels will

respect these closures. The document provides information on the Danish catches in the Norwegian waters in proportion to their total catches of cod.

STECF observations about the proposal from Denmark

The Danish document lists a number of items. It is not clear how some of them contribute to the plan's aim to "*ensure that catches from Danish demersal vessels […] are kept within the fishing opportunities for cod in the North Sea and Skagerrak, in order not to exceed, but could continue to use, the allocated quota*" or the plan's aim to "*reduce the mortality rate of juvenile cod (juvenile cod), i.e. below the minimum conservation reference size, which is 35 cm for North Sea cod and 30 cm for cod in the Skagerrak*". There is a lack of supporting studies to demonstrate the expected effects of the proposed measures.

The first set of measures lists the conditions under which vessels are allowed to fish inside the area covered by Article 1412. These measures allow vessels to fish in the restricted area when they can demonstrate that they have sufficient cod quota left to cover expected cod bycatches. STECF considers that, while this seems to be a meaningful measure in principle, the thresholds of remaining quota stipulated in the document should be sufficiently high to prevent they could be exceeded within one single fishing operation. STECF is not in the position to judge whether the thresholds in the plan are sufficiently high, because no data are provided on cod catches per fishing operation. While the document describes the quota pooling system, it is not made explicit whether vessels that have exceeded their quota could acquire sufficient quota to balance their catches post hoc from the pool. Thus, STECF is not in the position to judge to what extent this rule contributes to the plan's aim. STECF considers that the effect of this measure is ambiguous, as for vessels wanting to avoid being affected by the stricter rules, such thresholds can act as an incentive to underreport actual catches to ensure enough quota is left. STECF also notes that this provision in the plan implies that vessels can catch up to 100% of their quota in the restricted areas, namely 90% before 15 December and (in theory at least) the rest in from 15-31 December (when the plan proposes to suspend the restriction).

The second set of conditions under which the plan allows vessels to fish in the restricted areas are gear prescriptions. STECF notes that the rule allows vessels using these gears to fish in the restricted areas regardless of how much quota they have left. Thus, since none of the gears will be able to avoid 100% of cod catches, there is a risk that these vessels will exceed their cod quotas. Again, it is not clear to STECF whether such over quota catches can be balanced post hoc by acquiring quota from the pool.

With regards to the prescribed gear, several of them are already listed as derogated gear in Regulation (EU) 2020/900. For the fishery with a mesh size of 120 mm or more, an additional gear modification is proposed: of the use of an 140 mm square mesh panel. The Danish document provides no information about the selective properties of this gear for cod. STECF notes a Danish report by Pedersen and Madsen (2006) reports that using the

12 Article 14.2: *Vessels fishing with bottom trawls and seines with minimum mesh size of at least 70 mm in 4a and 4b or at least 90 mm in 3a, and longlines shall be prohibited from fishing in Union waters of ICES division 4a, North of latitude 58° 30′ 00″ N and South of latitude 61° 30′ 00″ N and in Union waters of ICES divisions 3a.20 (Skagerrak), 4a and 4b, North of latitude 57° 00′ 00″ N and East of longitude 5° 00′ 00″ E.*

140 mm square mesh panel mounted at 6-9 m above the codline in a 120 mm trawl reduced the cod catches by 12.6% in numbers (all sizes) and 9.5% in weight (fish larger than 40 cm). No information on the positioning of the square mesh panel is provided in the plan so it is not clear whether these results are comparable to the 140mm square mesh panel gear option proposed.

For the fisheries with mesh sizes of less than 120 mm and, in the North Sea, more than 70 mm and in the Skagerrak more than 90 mm, two other gear modifications are proposed: the use of scaring lines and scaring floats. The Danish document provides no information about the selective properties regarding cod of these gears. STECF notes, two publications testing scaring lines (Melli et al., 2018; Feekings et al., 2019) in the *Nephrops* fishery. These trials indicated that scaring lines can reduce the capture of larger cod but the results for smaller cod is mixed, with one set of trials showing an increase in their capture and another showing a reduction.

With regards to scaring floats, also to be used in the *Nephrops* fishery, two Danish cruise reports about trials where they are used in combination with different selectivity devices, show contradictory results: in Savina et al. (2019) the catches of cod of certain length classes were reduced, but in Feekings et al. (2020) the scaring floats did not have a significant effect.

Regarding the rule that vessels which have installed electronic monitoring equipment may also fish in the prohibited areas, STECF notes that this rule on its own does not contribute to the plan's aim of not exceeding the Danish fishing opportunities for cod. It only contributes to full documentation of cod catches. There are no details of how vessels will be stopped fishing once their cod quotas are reached under this measure.

The Danish document specifies how derogation (a) (i.e. cod catches do not exceed 5% of the total catches per fishing trip) of Regulation (EU) 2020/900 will be applied. It is stated that if a vessel does not comply with the criterion of a maximum of 5 % catches of cod per fishing trip, the vessel's authorisation may be withdrawn in accordance with detailed provisions laid down in the "*Order on measures to protect the cod stocks in the North Sea and Skagerrak*". STECF has not been provided with a document pertaining to this Order. Therefore, STECF is not in the position to judge whether compliance with the criterion will be sufficiently monitored and enforced to be effective in reducing cod catches. STECF also considers that establishing which vessels are illegible for the exemption based on their reported cod catches in 2017-2019 not exceeding 5% using historical logbook records, is problematic as undocumented discarding still occurs (around 15% of total catches for these years; ICES, 2019); therefore, it cannot be excluded that vessels qualifying according to this criterion may in fact have caught more cod than self-reported.

STECF notes that, while the proposal to develop and test new gears is worthwhile, the document does not clarify whether vessels included in these tests are meant to be allowed to fish in the prohibited areas. There is no indication of how these trials contribute to an in-year reduction in cod catches in accordance with the purpose of the remedial measures (since control gear in some form is normally used). STECF is, therefore, not in the position to judge how this contributes to the aim of the plan.

All the above requirements are suspended between 15-31 December 2020. STECF is not provided with information on the proportion of catches that are usually taken in this period. STECF is, therefore, not in the position to judge whether this item contributes to or even hinders the aim of the plan.

The plan contains a closed area with observed high abundance of juvenile cod, especially in quarter 3. STECF considers that protecting juvenile cod may contribute to the plan's aim of recovery of the cod stock. Nevertheless, because no information is provided on the intensity of cod fishing in quarter 3 or on how fishing effort is expected to redistribute, STECF is not in a position to judge whether this closure contributes to the aim of the plan to not exceed the Danish fishing opportunities for cod.

STECF notes that the Danish document includes a number of control and enforcement measures with the purpose of ensuring that cod catches are in accordance with the established fishing opportunities, and that juvenile cod is protected as far as possible. These include RTC controls, last haul inspections, the requirement for reporting haul by haul and a change of fishing area as well as measures in relation to area closures (VMS and AIS). STECF notes that these measures are already implemented in the Danish fishery and the document does not provide enough information on how these measures specifically will contribute to the aim of the proposed Danish National Cod plan.

With regards to closures in Norwegian waters, the document states that in the years 2017-2019, Danish fishermen fished on average 34 % of their total cod catches in the Norwegian part of the North Sea. Additionally, it states that in 2018-2019 Danish fishermen caught between 15-19 % of their total demersal catches in the Norwegian zone in the three closed areas. Nevertheless, because no information is provided on how fishing effort is expected to redistribute, STECF is not in the position to judge whether these closures contribute to the aim of the plan of not exceeding the Danish fishing opportunities for cod.

STECF response in relation to the TOR 3

ToR 3. Provide a qualitative assessment whether the measures contained in the national Danish and UK plans would help maintain cod catches in line with available quota. STECF should use previous experience in the assessment of the cod recovery plan (Regulation (EC) 1342/2008)) and other relevant reviews, e.g. Kraak et al (2013). Where considered appropriate, STECF should provide guidance on whether the plans would benefit from further refinement.

STECF considers that some elements in the Danish plan are already in place in other legislation and some are identical to elements already included in Regulation (EU) 2020/900, namely some of the derogated gears and the derogation for vessels whose trip catches of cod do not exceed 5 % of their total catches. Since STECF has not been asked to evaluate these elements of Regulation (EU) 2020/900, STECF has not commented on these further. Since STECF has also not been asked to evaluate the plan with regards to catches of juvenile cod and recovery of the cod stock, STECF will not comment on the plan's elements designed for this aim.

STECF notes that, based on the information provided and available scientific knowledge in published literature, a quantitative assessment, such as was done for the cod recovery

plan (Regulation (EC) 1342/2008)), of whether the measures contained in the Danish plan would help maintain cod catches in line with available quota, cannot be provided. The ToR asks, however, for a qualitative assessment, which is given below.

STECF expects that the first element of the plan, that vessels be allowed to fish in the restricted area when they demonstrate that they have a certain amount of quota left, could potentially help maintain cod catches in line with available quota. This is provisional on these thresholds being sufficiently high so that they cannot be exceeded in one fishing operation or that quota can be acquired from the quota pool post hoc to balance the catches.

While STECF notes that using a 140 mm square mesh panel may reduce the cod catches by around 10%, without further information, (e.g. on the uptake), STECF cannot assess to what extent allowing vessels using that gear to fish in the restricted area would help maintain cod catches in line with available quota. STECF further highlights that this gear option is unlikely to reduce cod catches to the same extent as the other cod avoidance gear included in the Regulation. For instance, as observed by STECF PLEN 20-01, trawls constructed with netting panels of very large mesh sizes (between 300 and 800 mm mesh size) have been tested in the North Sea. These have shown to decrease cod catches by between 30-75% depending on the construction of the trawl (Campbell et al., 2010; (Kynoch et al., 2011). Additionally, STECF PLEN 20-01 showed that a trawl fitted with a raised fishing line can reduce cod catches below 35cm by about 65% in catches by numbers.

STECF is not able to assess whether using scaring lines or scaring floats in the *Nephrops*-directed fisheries in the restricted area will lead to a significant reduction in cod catches, sufficient to maintain them in line with available quota. The results of the few studies that have been carried out are inconsistent.

STECF notes that the Danish document states that recorded catches of cod below the minimum reference size in the logbooks are smaller than those recorded through observer programs as well as what is being shown in last haul inspections.

STECF notes that allowing vessels which have installed electronic monitoring equipment to fish in the restricted areas is effective for verification of reported catch in the logbooks but does not on its own help to maintain cod catches in line with available quota.

STECF notes that suspending of the prohibition to fish in the restricted areas between 15 and 31 December may hinder the aim of maintaining cod catches in line with the available quota, unless the suspension is made conditional upon there being sufficient quota at that time of year. The reporting (haul by haul) and monitoring using VMS and AIS may assist monitoring the location of fishing vessels but by themselves will not maintain cod catches in line with available quota.

STECF cannot evaluate to what extent the Norwegian closures would help to maintain cod catches in line with the available quota without any information on expected effort redistribution.

STECF conclusions about the Danish proposal

With regards to the Danish National Cod Plan, the information provided to STECF is not sufficient to evaluate the plan. Nevertheless, STECF notes that many elements are already in place and are not new. Furthermore, while STECF considers qualitatively that a few elements of the plan may help to maintain cod catches in line with the available quota, most other elements are either not expected to help or may even potentially hinder the aim to maintain cod catches in line with the available quota.

References

Campbell, R., Harcus, T., Weirman, D., Fryer, R.J., Kynoch, R.J., O'Neill, F.G. (2010). The reduction of cod discards by inserting 300mm diamond mesh netting in the forward sections of a trawl gear. Fish. Res. 102, 221–226. https://doi.org/10.1016/j.fishres.2009.12.001

Feekings, J. P., Melli, V., Frandsen, R. P., Lund, H. Veiga-Malta, T., Nalon, M. and Krag, L. 2019. Scaring lines—An innovative and flexible solution for the *Nephrops* fishery (FLEXSELECT). DTU Aqua Report no. 352-2019.

Feekings, J., Melli, V., Frandsen, R., and Malta, T. 2020. Testing the placement of a SELTRA300 panel and scaring floats to reduce fish catches in the Danish trawl fishery for Norway lobster. Published by: National Institute of Aquatic Resources, P.O.Box 101, Nordsøen Forskerpark, DK-9850 Hirtshals, Denmark.

ICES, 2019. Cod (*Gadus morhua*) in Subarea 4, Division 7.d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak). In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, cod.27.47d20, https://doi.org/10.17895/ices.advice.5640.

Krag L. A., Herrmann B., Feekings J., Karlsen J.D. 2016. Escape panels in trawls – a consistent management tool? Aquat. Living Resour., 29 3 (2016) 306.

Kynoch, R.J., O'Neill, F.G., Fryer, R.J. (2011). Test of 300 and 600 mm netting in the forward sections of a Scottish whitefish trawl. Fish. Res. 108, 277–282. https://doi.org/10.1016/j.fishres.2010.12.019

Madsen, N. (2007). Selectivity of fishing gears used in the Baltic Sea cod fishery. Rev. Fish Biol. Fish. 17, 517–544. https://doi.org/10.1007/s11160-007-9053-y.

Melli, V., Karlsen, J. D., Feekings, J. P., Herrmann, B. and Krag, L. A. 2018. FLEXSELECT: counter-herding device to reduce bycatch in crustacean trawl fisheries. Canadian Journal of Fisheries and Aquatic Sciences. 75(6): 850-860. https://doi.org/10.1139/cjfas-2017-0226.

Pedersen, E. M., and Madsen, N. 2006. Forsøg med 140 mm kvadratmaske panel.

Savina, E., Malta, T., Sokolova, M. and Feekings, J. 2019. Testing a modified SELTRA codend to reduce fish catch in the Danish trawl fishery for Norway lobster. Published by: National Institute of Aquatic Resources, P.O.Box 101, Nordsøen Forskerpark, DK-9850 Hirtshals, Denmark.

STECF. 2003. Meeting on cod assessment and technical measures. Brussels, 28 April-7 May 2003. 127 pp. Appendix 5.

Valentinsson, D., Wernbo, A. 2018. Relativ selektivitet för tre alternativa bottentrållyft i Skagerrak och Kattegatt. Ch. 4 (p. 36-51) in Nilsson et al. 2018. Sekretariatet för selektivt fiske- rapportering av 2016 och 2017 års verksamhet. Aqua Reports 2018:4. Sveriges lantbruksuniversitet, Institutionen för akvatiska resurser, Lysekil, 211 s. ISBN: 978-91-576-9557-4.

6.4 Spanish exemption request under Paragraph 2 of Article 13, Council Regulation (EU) 2020/123

Background provided by the Commission

Both cod and whiting in the Celtic Sea are regulated as target stocks under the Western Waters Multi-annual plan (WWMAP)13, but since 2019, only bycatches are allowed for both stocks, a targeted fishery being prohibited. In 2019, ICES' catch advice showed that cod and whiting stocks in the Celtic Sea are below Blim. Following Article 8 of the WWMAP, the EU was legally obliged to adopt remedial measures as safeguards, to help rebuild these stocks. The ICES mixed fisheries advice14 estimated that without any change in exploitation pattern in 2020, catches of cod would have been 2055 t, while ICES advised zero catch and while a TAC was agreed at 805t for 2020.

The Fisheries Council of December 2019 adopted the "Remedial measures for cod and whiting in the Celtic Sea" under article 13 of the 2020 Fishing Opportunities regulation15.

The basis for these measures was the urgent need for a general improvement in selectivity by increasing mesh sizes in a specific part of the Celtic Sea and the requirement for bottom trawlers to use fishing gear that avoids cod bycatches. Article 13 requires for vessels fishing in the Celtic Sea cod protection zone with more than 20% haddock catches to use certain gear configurations (paragraph 1a) and, in addition as of 1 June, a "raised fishing line" configuration or another dispositive equally selective for avoidance of cod (paragraph 1b). It also provides for the use of selective gear as alternatives to the above if they result in catches of less than 1% of cod (paragraph 4). Similarly vessels whose bycatches of cod have been historically below 1.5%, can be exempted under paragraph 2.

So far in 2020 the STECF has been asked to both review Article 13 and a proposed joint recommendation for replacing Article 13 with a delegated act. In both cases, the STECF was critical of the use of a cod threshold, also noting the problem of low cod abundance could make fishing gears seem artificially more selective than they are.

The Commission has received a request from the Spanish Government, asking that STECF analyses if their vessels, as detailed in the request, can be exempt from Article 13 under the provisions of paragraph 2.

Background documents are published on the meeting's web site on: https://stecf.jrc.ec.europa.eu/plen2003

Request to the STECF

The STECF is requested to:

a) Considering if the attached data set is sufficiently robust to analyze Spanish catches, landings and discards in the requested vessels for exemption, in the following: Spanish

13 https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1562943926061&uri=CELEX:32019R0472

14 http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2019/2019/FisheriesOverviews_CelticSeas_2019.pdf

15 https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1581520382306&uri=CELEX:32020R0123

vessels fishing with bottom trawls and seines in ICES divisions from 7f to 7k and in the area west of 5° W longitude in ICES division 7e, or vessels fishing with bottom trawls in ICES divisions from 7f, 7g, the part of 7h North of latitude 49° 30' North and the part of 7j North of latitude 49° 30' North and East of longitude 11° West.

b) If the data set is sufficiently robust enough to address point a), and taking into account the previous work of the STECF on the subject of cod thresholds, analyze if the requested vessel's fishing patterns, locations or fishing gear are likely to give bycatches of cod (wanted and unwanted catches), less than 1.5%, also in the situation where cod SSB is above $B_{trigger}$.

Summary of the information provided to STECF

STECF was provided with two documents to inform its review:

1. Letter from the Ministerio de Agricultura, Pesca y Alimentación

In correspondence to DGMARE, The Spanish ministry is requesting an exemption for Spanish vessels to the requirement to use 100mm mesh size in demersal fisheries in the Celtic Sea under Article 13(2) of Regulation (EU) No 2020/123. This is based on Spanish vessels fishing in area 7 having bycatches of cod historically below 1.5%. Using the mandatory 100mm as required in Article 13(2) would result in lower catches of megrim, impairing vessel profitability.

2. IEO Report" Scientific report to apply for exemptions for cod and whiting for OTB Spanish fishery in the Celtic Sea (NWW) under 2020 fishing opportunities Article 13"

A study from the Instituto Español de Oceanografía (IEO) to support the request for an exemption to Art. 13(2) was provided. This document presents data from the Spanish fleet to show that historical catches of cod do not exceed the 1.5% threshold of total catches.

The study provides a map of sampled hauls during the period 2016-2019 obtained during the Spanish DCF onboard observer campaign. According to the study, the sampling covers from 2.0 to 4.2% of the annual trips, and 23.1 to 53.8% of the 14 vessels of y the Spanish fleet conducting mixed fishery with OTB_DEF_70-99 in ICES area 7.

The study describes the main fishery conducted by the Spanish fleet in ICES area 7. This is a directed OTB fishery targeting Hake, Megrim, and Monkish (HKE-MEG-MON) involving 13 to 14 vessels (métier OTB_DEF_70-99_0_0), and 5 vessels targeting hake (métier OTB_DEF_100-119_0_0).

The study also provides a tabulation of total catches (landings + discards) per area and annual percentages of cod in those catches (0.31% to 1.05% of cod catch, all areas confounded, from 2016 to 2019). It emphasizes that the annual percentage over the period 2016-2019 aggregating the sampled trips is below the 1.5% cod threshold, and therefore, justifies an exemption under Art.13(2).

Finally, the study describes ongoing selectivity trials (Project RAPANSEL, Valeiras et al., 2019). In this study, a range of gear combinations including 100mm T90 codends, 80mm codends and 80mm codend with various SMPs were tested. The study concludes that the design T0_80_T45_04_150, named "Coppo 2", (i.e. 80mm with a 150mm square panel), is the most promising design for decreasing catch of small megrim and hake when compared to the baseline gear, which for the purposes of these trials was taken as a D100mm codend.

STECF comments

STECF notes that the EU multiannual plan (MAP) for stocks in the Western Waters and adjacent waters applies to cod and whiting stocks. The plan specifies conditions for setting fishing opportunities depending on stock status and making use of the FMSY range for the stocks.

STECF observes that the latest ICES advices evaluate that both cod and whiting are harvested unsustainably (period 2017-2019):

- Cod.27.7e-k is mainly fished by France, Ireland, UK, and Belgium assessed below Btrigger In 2020. Agreed TAC in 2020 was 805 tons TAC.
- Whg.27.7b-ce-k is mainly fished by France, Ireland, UK, Belgium assessed below Btrigger in 2019 and 2020. Agreed TAC in 2020 was 10863 tons. Whiting in divisions 7.b–c and 7.e–k is caught as part of a mixed fishery with Haddock and cod.

Given that the cod and whiting stocks in the Celtic Sea were assessed by ICES to be below Blim, according to Article 8 of the NWW MAP (Regulation (EU) 2019/472), the 2020 Fishing Opportunities Regulation (Regulation (EU) 202/123) included remedial measures (Art. 13) to ensure rapid return of the stocks to levels above the level capable of producing MSY.

STECF acknowledges that the Spanish fleet in area 7 targets megrim (meg), hake (hke) and monkfish (mon). Latest ICES advices evaluated that these three stocks are currently harvested sustainably (F<Fmsy and SSB>MSY Btrigger during 2017-2019). By order of quota share, Meg.27.7b-k8abd is fished by France and Spain, UK, Ireland and Belgium, Hke.27.3a46-8abd is fished by France, Spain, UK and Ireland, and mon.27.78abd is fished by France, UK, Ireland, Belgium and Spain.

Hereafter STECF provides a description of the 2020 remedial measures for cod and whiting in the Celtic Seas, which are more stringent than the measures contained in the TMR, Regulation (EU) 2019/1241. These measures will remain in force until the end of 2020 (see Table 6.4.1).

A derogation to Art. 13(2) requires first that the trips-catch composition does not exceed 20% of haddock. In a second step, a threshold on cod on trip-catch composition can trigger an exemption to allow vessels not to use a D100mm mesh size gear.

Table 6.4.1. The remedial measures for cod and whiting in the Celtic Seas as defined in Reg. 2020/123, Art.13. The triggered components by the Spanish request are marked in **bold**.

Art.13 Reg. 2020/123 Remedial measures for cod and whiting in the Celtic Seas 7f, 7g, 7h north, 7j north-east)	- If (trawls) AND (within Celtic Sea Protection Zone i.e. 7f or 7g or 7h north or 7j north-east) (Art. 13(1)) - if catch per trip >20% in haddock then - Choose among D110mm +120mm SMP, D100mm-T90, D120mm, (100mm+160 SMP until May20)

	- 1 meter fishing line spacing OR any equivalent selective-to-cod device - Unless any equivalent selective gear proving <1% cod trip catch as assessed by STECF (Art. 13(4)) - If (seines) AND (within Celtic Sea Protection Zone i.e. 7f or 7g or 7h north or 7j north-east) (Art. 13(1c)) - if trip-catch >20% in haddock then - Choose among D110mm +120mm SMP, D100mm-T90, D120mm with no 1 meter fishing line spacing - Unless (Art. 13(2)) - if(trawls OR seines) AND ((trip-catch <20% in haddock in 7fghj)) OR (7f or 7k or 7e west)) - **Use >D100mm** - **OR if(cod<1.5% catch-trip) then Use Baseline Gears NWW TM Annex VI** - Unless *Nephrops*. If *Nephrops*>5% AND Celtic Sea protection Zone then Reg. 2018/2034 Art.9(2) of discard plan applies (80mm-300mmP or seltra or 35mm sorting grid or D100-P100 or dual cod-end with upper D90-T90-SP300mm)
Regulation 2019/1241 Annex VI Part B (TMR)	• **100 mm 7b to 7k** • **>80mm if** ○ **COD+HAD+POK<20% catch that is landed per trip AND** ▪ **>80mm + Panel 120mm square meshes for OTB targeting HKE-MEG-MON in ICES subarea 7** ▪ >80mm + Panel 120mm square meshes for OTB targeting WHG-MAC and NQS in ICES subarea 7 ▪ >80mm + Panel 80mm square meshes for OTB targeting SOL in ICES subarea 7 ▪ >80mm for OTB targeting WHG-MAC and NQS in ICES subarea 7d and 7e ▪ >80mm + Panel >120mm or 35mm sorting grid or equivalent for OTB targeting NEP in NWW ▪ >160mm Panel for TBB targeting SOL in 7a,b,d,e,f,g,h,j ▪ >40mm Loliginidae, Ommastrephidae ▪ >16mm pelagic and shrimp

	▪ >16mm sandeel

STECF notes that the request for a derogation to Article 13(2) is supported by annual aggregated catch information. Contrary to what is stated in the request to STECF, no attached data set of trip-level data underlying this information was provided.

STECF notes that Art 13(4) in the Regulation requires that the catch percentages should be calculated as the proportion by live weight of all marine biological resources landed *after each fishing trip*. In the absence of other specifications, STECF interprets this as such that every single trip should comply with the maximum 1.5% cod threshold (i.e. no trip should be above that threshold), not as the average for all trips over the year should comply with the maximum 1.5% cod threshold (i.e. some trips might be above and some might be below that threshold). In this regard, STECF remarks that the Regulation does not indeed specify how many trips above the 1.5% threshold would disqualify a vessel/fishery from the exemption. Therefore, it is not clear whether even a small proportion of trips with a catch of cod larger than the 1.5% threshold or an average value below 1.5% based on a large number of trips would result in the exemption not being granted.

The supporting study provides the range of annual estimates for cod proportion in catches which is between 0.3% to 1.1 %, with the average over the period (2016-2019) being 0.45%. However, STECF notes that it is important to provide the catch percentage of the individual trips when only a small proportion of trips have been sampled. STECF observes that if only a limited sample of the total number of trips is being examined (in this case a maximum of 13 out of 312 trips, representing no more than 5% of the total trips during the period 2016-2019, and also not covering every vessel), an annual aggregation does not provide enough information to estimate the actual number of trips that may have exceeded the 1.5% threshold. Even within the sampled trips, if the annual average is around 0.5-1%, it appears statistically likely that at least some of the sampled trips would have been estimated above 1.5% However, the standard deviation or confidence interval of discards rates per trip is not provided. Furthermore, there is no information in the supporting study to judge to what extent the sampled trips or vessels are fully representative of the visited areas.

Hence, STECF underlines that there is not enough detailed information on the sampling data provided, to judge whether all the Spanish fleet in ICES area 7 comprises vessels whose by-catches of cod would not exceed 1,5 % per trip as set out in Art 13.2.

Regarding selectivity, STECF notes that the supporting study refers to ongoing selectivity trials testing alternative gear combinations to the D100mm required by Art 13(2). However, STECF notes that these catch comparison trials mainly focus on the selectivity for the targeted stocks (hake, megrim and monkfish) by the Spanish fleet in ICES area 7 but were not designed to assess the level of bycatch of cod and whiting with the control and test gears.

STECF is not aware of any other selectivity studies showing the 80mm and 150mm square mesh panel, here considered the best combination tested, to be effective in reducing catches of cod. STECF also notes that based on previous studies (Santos et al., 2016), it is unlikely that the addition of a square mesh panel in the top panel would reduce the catches of undersized megrim given the morphology and behaviour of this species.

STECF notes that Spain has no quota allocation for cod and whiting in Area 7 and has historically reported only small amounts of bycatch of these two species. Before the

introduction of the landing obligation, bycatches were discarded. More recently, they have been covered via swaps with the other Member States using a quota pool mechanism introduced in 2019 through the Fishing Opportunities Regulation (Art. 8).

STECF acknowledges that the targeted HKE-MEG-MON fishery is mainly conducted in areas of low cod and whiting abundance as it targets areas on the edge of the continental shelf in depths of 100-700m. This is at the limits of the depth ranges that cod and whiting populate (e.g., Calderwood et al. 2020). However, STECF has not been provided with any evidence or supporting documentation to show that there is no spatial overlap between the areas where the fishery is conducted and the distribution of cod and whiting. Therefore, STECF notes that some bycatch of cod and whiting are possible, even if likely to be small.

Finally, STECF also notes that the Regulation does not define the temporal scale over which bycatches of cod should have been below 1.5%. The study provides catch data over the last three years. STECF underlines that cod was below SSB trigger under this period so little information is available on cod bycatches in periods of higher abundance.

STECF conclusions

- TOR a): Is the Spanish data and information provided robust enough to support an exemption under Article 13(2)?

STECF concludes there is not enough information to warrant an evaluation of the request for a derogation, since only limited aggregated catch data have been provided. Only annual averages of catch percentages without any details per trip as required by Art 13(4) has been provided. Annual aggregations as provided by the supporting study are not informative to calculate a proportion of catch to compare with catch thresholds whenever there are a large proportion of unsampled trips and vessels, and several fished areas, as it is the case in the DCF sampling program.

STECF concludes that the best fit-for-purpose data to ensure full monitoring of cod catches below the threshold would be trip-based catch proportions. This data should include average catch proportions per area and for each vessel, derived from a representative percentage of the trips to ensure and document a statistical uncertainty range that does not go beyond the acceptable catch proportion threshold. Additionally, if the derogation is requested for a subset of vessels only and not for the entire fishery, the data should also allow analysing the catch composition for those vessels specifically.

STECF further acknowledges that the Spanish DCF sampling programme is likely not to be sufficient to evaluate a measure based on a maximum threshold per trip (and not average per year), as required by Regulation 2020/123 Art. 13, even if the procedure ensures that the sampled trips are representative (unbiased and randomized sampling). Enforcing a trip-based catch rule (instead of a fishery- and year-based rule) would in theory require 100% at sea monitoring coverage to be adequately enforced and controlled, and/or strict spatial restrictions to avoid bycatches with certainty.

- TOR b): To which extent the gear combinations proposed are likely to give bycatches of cod less than 1.5%, also in future (when cod could be above Btrigger)?

STECF concludes that no documentation has been provided that allows evaluating whether the proposed gear designs are likely to reduce possible bycatch of cod to less than the 1.5% threshold. Further, STECF is unaware of any other studies showing that the proposed gear combinations are selective for cod.

STECF acknowledges that there is likely limited spatial overlap between the distribution of the Spanish fishery targeting hake, megrim and monkfish, and the distribution of cod and whiting populations. However, STECF has not received any information demonstrating that the stocks are fully spatially segregated, so limited bycatches of cod and whiting are likely.

- General comments on the use of thresholds

STECF has earlier raised concerns of using catch proportion thresholds to trigger remedial actions on protected species, and has advised against using them in PLEN 20-02. Given the relevance to this TOR which is based on such a threshold, STECF PLEN 20-03 reiterates these concerns here.

As extensively discussed in STECF-PLEN-20-02, there are inherent risks for managing overfished stocks with thresholds. This is the ground for mismanagement with several side effects, including the risk of inflating the overall catch to lower the proportion of undesired catch when expressed as a percentage of the total. Hence, STECF-PLEN-20-02 concluded that setting thresholds on stocks that are severely depleted is inappropriate as this could create perverse incentives which would potentially undermine the objective to minimize catches and improve exploitation patterns. STECF concludes that if thresholds are required, then these should be focussed on the targeted stocks, not on the stocks to be avoided.

Finally, STECF reiterates that questions related to the effects of catch composition thresholds on the populations of protected bycatch, and possible proposals for changing the selectivity of the gears to comply with them, cannot be answered using standard available information published in the scientific literature or accessible in publicly available databases (such as FDI database), where data are aggregated over many trips and vessels with resulting catch composition being an average that does not allow fine-scale comparisons between differences in targeting across trips. Such effects can thus only be evaluated using disaggregated quantitative data specific to the fisheries studied that shall be provided by the Member States. Typically, catch data by fishing operation or trip (including discards) from the fishery are used to estimate the proportion and total volume of historical catches of bycatch species below or above a given catch threshold. These can then be combined with the underlying length-based abundance of the stock (from survey data) impacted with a given gear selectivity ogive. Examples of this are provided in STECF PLEN 20-01, where individual trip data were made available by a Member State to STECF.

References

Calderwood, J., Robert, M., Pawlowski, L., Vermard, Y., Radford, Z., Catchpole, T. L., & Reid, D. G. (2020). Hotspot mapping in the celtic sea: An interactive tool using multinational data to optimise fishing practices. Marine Policy, 116 doi:10.1016/j.marpol.2019.103511

Santos. J., Hermann, B.,Otero, P., Fernandez, J., Perez, N. (2016) Square mesh panels in demersal trawls: does lateral positioning enhance fish contact probability? Aquat. Living Resour. Volume 29, Number 3, July-September 2016. DOI:10.1051/ALR/2016025

Valeiras, J., J.C. Fernández, M. Barreiro, O. Fernández and E. Velasco, 2019. Technical Report of selectivity trial RAPANSEL2019: Improvement of bottom trawl selectivity and reduction of fisheries discards in North Western Waters ('Gran Sol fishing ground'). 66pp

6.5 Assessment of a joint recommendation concerning technical measures for the conservation of fishery resources of the North Sea ("sprat box")

Background provided by the Commission

The new Technical Measures Regulation (Regulation (EU) 2019/1241) introduces the possibility for regional Member State groups to amend certain regional baseline selectivity standards on the basis of the joint recommendations (JR), based on which the Commission is empowered to implement delegated acts. This permits the tailoring of detailed and technical rules so as to take into account regional specificities. The alternative measures should as a minimum lead to such benefits for the conservation of marine biological resources that are at least equivalent to the ones provided by the baseline standards, in particular in terms of exploitation patterns and the level of protection provided for sensitive species and habitats.

For many years, the so-called "sprat box" has restricted fishing for sprat to protect herring in certain parts of the North Sea. A derogation that suspended the existing sprat box was introduced in the pelagic discard plan by Regulation (EU) 2017/1393. This exemption is applicable until 31 December 2020, when the current pelagic discard plan expires. In the meantime, the sprat box has been taken over in Annex V, Part C, point 4 of the new Technical Measures Regulation. Any possible continuation of this derogation would therefore have to be assessed against the requirements of the Technical Measures Regulation.

The JR argues that repealing the sprat box holds no harmful impacts on the ecosystem or the protection of the herring stock. The Scheveningen Group therefore requests that the sprat box provision be repealed from the Technical Measures Regulation.

Therefore the STECF is asked to analyse the effects of the attached Joint Recommendation on the ecosystem, paying special attention to consistency with the provisions of Article 15(4) (5) and (6) of the Technical Measures Regulation and achieving the objectives and targets set out in Articles 3 and 4 of the Technical Measures Regulation.

Background documents are published on the meeting's web site on: https://stecf.jrc.ec.europa.eu/plen2003

Request to the STECF

STECF is requested to evaluate the scientific information supporting the joint recommendation on the sprat box in the North Sea, paying particular attention to Article 15(4) (5) and (6) of the Technical Measures Regulation. STECF should assess to what extent the joint recommendation helps at achieving the objectives and targets set out in Articles 3 and 4 of the Technical Measures Regulation.

In particular, STECF is requested to assess:

- Whether, based on the information provided with the JR, the lifting of the sprat box as set out in Annex V, Part C, point 4 of the Technical Measures Regulation would ensure levels of protection that are at least equivalent to what is currently in force;
- If the STECF assessment of the above is inconclusive based on the evidence provided, STECF should set out why it cannot come to a definitive answer and assess which additional scientific

information would be needed to prove that the equivalent levels of protection will be maintained.

Summary of the information provided to STECF

STECF was provided with several documents to inform its review:

- Joint Recommendation of the Scheveningen Group concerning technical measures for the conservation of fishery resources of the North Sea (15.10.2020)

This Joint Recommendation concerns the technical measures for sprat fisheries in an area along the Danish North Sea coast, called "the sprat box". The JR seeks to repeal the sprat box included in Annex V, Part C, point 4 of Regulation No 2019/1241 using the procedure set out in Article 15(4) of that Regulation. This empowers the Commission to adopt delegated acts on the basis of Joint Recommendations submitted by regional groups of Member States.

The JR notes that the pelagic discard plan laid down in Regulation (EU) N° 2017/1393 currently allows for a derogation from the prohibition of fishing in the sprat box until 31st of December 2020. It recalls previous evaluation on the sprat box examined by ICES (2017, sr.2017.06), and new data comparing herring bycatch inside and outside the sprat box from the 1st of July 2020 to the 31st of August 2020 supplied the Danish Fisheries Agency. This demonstrates that the percentage of herring bycatch is similar in catches inside and outside the sprat box. Based on this information, the Scheveningen Group requests that the sprat box provision is repealed from Regulation No 2019/1241.

- Sprat box ICES eu.2017.06.pdf

ICES response to a Special Request to give advice on whether the proportion of herring catches when fishing for sprat is higher outside or inside the sprat box and determine whether allowing targeted fishing for sprat inside the sprat box would reduce unwanted catches. Considering the possible development of the stocks of sprat and herring in the North Sea, ICES was also requested to advise on an interval after which the measure should be reviewed. To answer the request ICES analysed the results from an experimental fishery carried out by Denmark in 2014 and 2015.

- Catch data July-August 2020

An Excel workbook data file containing bycatch data by species in the Danish Industrial fishery for sprat in the North Sea from 1 July to 31 August 2020. The information originates from the logbooks of the industrial fishery (trawlers with mesh sizes smaller than 32mm operating either inside, outside or both (inside and outside) the sprat box. No report accompanied the data other than a summary table appearing in the Workbook and the JR. A revised version of the file was provided during the STECF meeting.

- ICES HAWG report 2020

This is the report of the ICES herring assessment working group for the area south of 62° n (HAWG) in 2020 (ICES 2020) and includes the assessments of North sea herring and sprat.

- Section 8 of 2016 HAWG report:

A section of the ices HAWG report on North Sea sprat which provides an analysis of an experimental fishery which was carried out by 14 vessels of the industrial small meshed size fishery operating both inside and outside of the sprat box in the months of July, August, September and October in 2013, 2014 and 2015. This study was used as basis of the ICES answer to the Special request in 2017 mentioned above (ICES eu.2017.06.pdf).

- Danish sampling plan for industrial fisheries

A sampling plan from the Danish Fisheries Agency's for the weighing of fisheries products landed in unsorted industrial catches, which was evaluated by STECF in PLEN 20-02. The aim of the sampling plan is to ensure correct weighing at the time of landing so that transport documents, sales notes, takeover declarations and landing declarations can be filled in with the correct species composition, thus meeting the requirements laid down in Article 33 of Council Regulation (EC) No 1224/2009, including those relating to correct quota reporting.

With this sampling plan, the catch composition in the industrial fisheries (incl. sprat) is monitored to ensure correct reporting of bycatches by species and area.

- Commission approval of the Danish sampling plan for industrial fisheries.

COMMISSION IMPLEMENTING DECISION of 8.5.2020 approving sampling plans and control plans for the weighing of fishery products in accordance with Regulation (EC) No 1224/2009. (Only the Danish and Latvian texts are authentic)

Background Information

The definition of the Sprat Box is found in Annex V, Part C, point 4 of the Technical Measures Regulation (REGULATION (EU) 2019/1241): This sets restrictions on fishing with any **towed gear with a codend mesh size of less than 32 mm or static nets less than 30 mm mesh within a coastal area to the west of Denmark the** *so called Sprat Box* (Figure 6.5.1), from 1 July to 31 October.

The Sprat Box to the East of Denmark was first established in 1984 with the objective of significantly reducing the catches of juvenile herring (mainly age 0 individuals) in ICES division 4b. This effect was expected because more than 90% of age 0 herring caught in the division 4b came from the sprat fishery. These were bycatches mainly caught during the 3rd and 4th quarters within the closure area (STECF, 2007). The area lies off the west-coast of Denmark, covering the rectangle defined by 7° E, 55° 30´ N, 57° N and the Danish coastline. It was closed to industrial sprat fishing from 1st of July to the 31st of October.

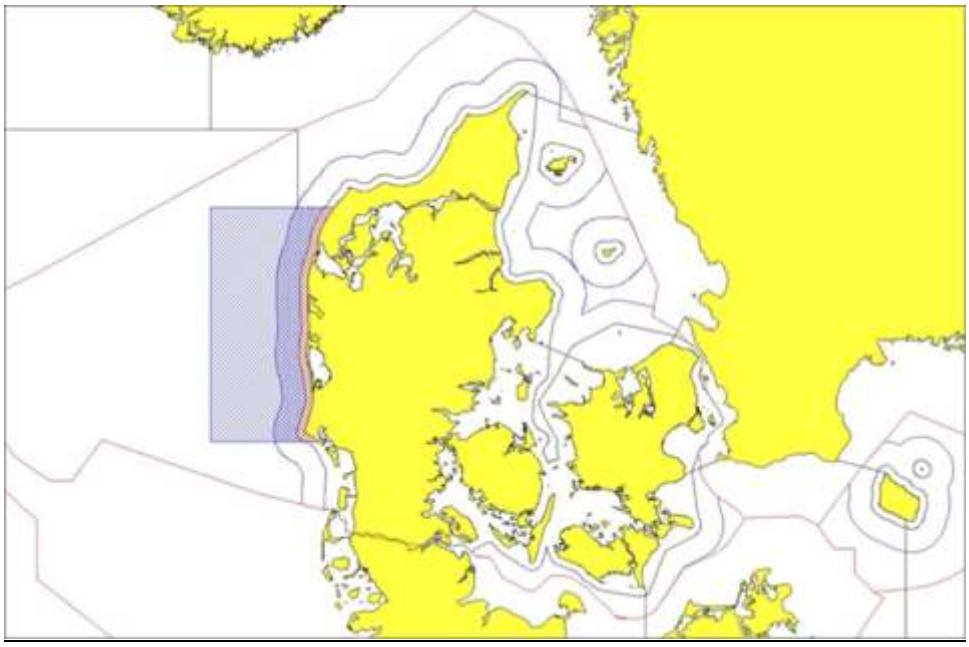


Figure 6.5.1: The Sprat Box area (taken from the Scheveningen Group Joint Recommendation)

Regulations:

Until 1996, the only control on the bycatch of herring in industrial, small meshed fisheries was a sprat TAC, with a 10% bycatch limit of herring applying to individual trips. Available data from 1987 to 1995 showed a very high mortality of immature herring, mainly in the small meshed fisheries. As a result, a herring bycatch ceiling TAC for the small meshed fisheries in the North Sea was put in place in 1996. Since the bycatch ceiling was introduced, reported catches and fishing mortality on 0-1 group herring have declined.

Information on bycatches in the industrial fishery is provided by Denmark and Sweden. This small-meshed fishery (by Denmark and Sweden) is allocated a separate EU quota (for the Fleet B which is the industrial (<32 mm mesh size) fleet of EU nations operating in areas 4 and 7.d).

The agreed herring TAC for 2019 was 398 198 tonnes for Area 4 and Division 7.d, where no more than 42 351 t should be caught in Division 4.c and 7.d. For 2020, the TAC for the A-fleet (the one harvesting herring for human consumption in 4 and 7.d, including herring bycatches in the Norwegian industrial fishery) is the same amount as in 2019 (385 008 t), including a TAC of 42 351 t for Division 4.c and 7.d. The bycatch TAC for the B-Fleet in the North Sea (and Division 2.a) was 13 190 t in 2019 and has decreased by 32% to 8954 t in 2020.

Since the introduction of annual bycatch ceilings in the small-meshed fishery in 1996, these ceilings have only been fully taken in 2014 and 2016 (Table 6.5.1)

Table 6.5.1: TACs and catches of North sea Herring for the last years (taken from ICES HAWG REPORT 2020).

The total North Sea TAC and catch estimates for the years 2014 to 2019 are shown in the table below (adapted from Table 2.1.6).

Year	2014	2015	2016	2017	2018	2019
TAC HC ('000 t)	470	445	518	482	601	385
"Official" landings HC ('000 t) *	490	472	545	485	594	439
Working Group catch HC ('000 t)	493	474	545	485	594	440
Excess of landings over TAC HC ('000 t)	23	28	27	3	-7	55
Bycatch ceiling ('000 t) **	13	16	13	11	10	13
Reported bycatches ('000 t) ***	14	8	15	7	8	5
Working Group catch North Sea ('000 t)	507	482	560	492	602	442

HC = human consumption fishery

* Landings might be provided by WG members to HAWG before the official landings become available; they may then differ from the official catches and cannot be used for management purposes. Norwegian bycatches included in this figure.

** bycatch ceiling for EU industrial fleets only, Norwegian bycatches included in the HC figure.

*** prior to 2019 provided by Denmark only. In 2019 by Denmark and Sweden .

Since 2015, the landing obligation has been in place for the European pelagic fleets operating in the North Sea and the Baltic. All catches of quota-regulated species must be landed.

Previous evaluations of the sprat box

A first evaluation of the effects of the "Sprat Box" were carried out by Baron (2002) in an internal, unpublished review quoted by STECF (2007) and concluded:

— No clear evidence that the closed area resulted in decrease of annual mortality of age 0 herring in division 4b consistently over time, even if more than 90% of the catches were considered to be due to the bycatch in the coastal area by this fishery.

— In contrast, there was a nearly constant decrease in the catches and mortality of age 0-1 herring over years after 1996 coinciding with the introduction of a bycatch ceiling for herring for the small meshed fishery in the North Sea. The observed increase in the age 0 catches during the 1990's after the establishment of the closed area could not be explained by variations in herring recruitment or sprat biomass.

A second review by STECF (2007) included information from IBTS 3rd Q haul data, 1991-2006 (using a demersal trawl using GOV gear, different from the fleet) and from North Sea acoustic surveys, 2003- 2006. The examination of the IBTS survey suggested that the closed area covered a region where there was potential for significant bycatch of 0-wr (winter ring) herring, as seen in the ratio of the catch rates and the high tendency of the two-species occurring together. However, these results were not unique to the closed area, and there were regions nearby, especially to the west and south, where both mixing phenomena were stronger. Acoustic data were insufficient to clarify this issue.

STECF (2007) concluded that "*Analysis based on IBTS Q3 data suggests that the current placement of the closed area may be sub-optimal. However, the relationship between the IBTS indices and the expected bycatch rates of juvenile herring in the sprat fishery is unclear, as is the reliability of a bottom-trawl survey for assessing sprat abundance. Attempts to resolve this issue using information from acoustic surveys have been hampered by the poor availability of the data. As a consequence, it has not been possible to rigorously assess the effectiveness of closure in its current or alternative configurations."*

STECF (2007) further concluded that until the doubts on the effectiveness of the current closure and/or any re-configuration of the closure (by further analysis on better data) were resolved, the current closure should remain in place (STECF 2007).

Further data collection requirements were pointed out, including detailed knowledge of the exact spatial distribution of juvenile herring, and fishery data comprising age- and statistical rectangle-resolved data on the herring bycatch in the commercial sprat fishery (STECF 2007).

STECF reiterated these findings in a further review of closed areas carried out by STECF PLEN 14-02.

Basis of the provisional lifting of the "sprat box" in the pelagic discard plan under Regulation (EU) 2017/1393:

The derogation that suspended the existing sprat box was introduced in the pelagic discard plan by Regulation (EU) 2017/1393, which is applicable until 31 December 2020, when the plan expires. This was based on an ICES Evaluation (ICES 2017) of the effects of lifting the "sprat box", based on the analysis of an experimental fishery conducted in the months of July, August, September, and October in 2014 and 2015 (covering the main season of the commercial fishery for sprat) (ICES 2016). The analyses showed no significant difference in the relative amount (in numbers) of herring vs. sprat in catches inside and outside the box, but that the relative catch (in weight) of herring was significantly lower inside the box than outside.

ICES (2017) advised "*that the proportion of herring caught by weight in an experimental fishery for sprat was higher outside than inside the sprat box, but there was no difference when measured by number. On this basis, fishing inside the sprat box would be expected to reduce unwanted catches of herring (by weight) compared to fishing outside. ICES advises that it is unlikely there would be any effect on herring or sprat stocks if the sprat box was lifted. ICES considers that there is no further need to review the sprat box as other management measures are sufficient to control herring bycatch*".

ICES detailed further in its advice (2017) that "*this small meshed fishery includes the sprat fishery and ICES considers that if the TAC is set in accordance with scientific advice, is fully enforced and is complied with, then this measure is sufficient to control the bycatch of herring in the sprat fishery. ICES therefore advises that there is no further need to review the sprat box as long as the bycatch TAC is implemented in accordance with scientific advice and is complied with*".

EWG 17-03 (STECF-17-08) also evaluated the potential lifting of the Sprat Box in assessing the Joint Recommendations submitted by the Scheveningen Group to establish a discard plan in the North Sea. This evaluation was based on the same information as ICES and concluded that "*there currently is only limited evidence to support this derogation to remove the sprat box. Given the fact that the supporting study for this derogation request only covered two years, further research would be useful in evaluating the validity of the conclusions reached by ICES*."

STECF observations

STECF PLEN 20-03 notes, that since the experimental fishery in 2014 and 2015 showed that the herring were caught in similar numbers but lower weight inside the box compared to outside., this would imply that the mean weight of herring caught inside the sprat box would be less than those caught outside and thus indicating the catches comprise younger fish. If fish are smaller in the box, then the 10% bycatch ceiling would imply a greater catch in number inside than outside for an equivalent bycatch weight in both areas, and therefore a higher mortality on younger herring, contrary to the intention of the sprat box, which is to protect juvenile herring.

However, the original HAWG report (ICES 2016) was not fully conclusive on this. It showed that about 31-32% reduction in bycatch by weight (with a significant $P<0.02$) versus a larger, but non significant 45-47% reduction of bycatch by number (P around 0.10-0.12).

Table 6.5.2: Relative Effects of fishing Outside vs inside the Sprat Box for the joint analysis for the 2014 and 2015 experimental fishery (from ICES HAWG report --ICES 2016)

	Mixed model	ANOVA model
Comparisons bycatches in weight	-31%	-32%
Significance (Probability value of coeff)	0.0005	0.0106
Comparisons bycatches in number	-45%	-47%
Significance (Probability value of coeff).	0.1074	0.114

ICES (2016) also analysed survey data from IBTS to assess potential differences in herring catches inside or outside the box. This showed no significant difference between the number (P=0.7368 and P=0.8250) or weight of herring (P=0.4585 and P=0.5777) per kg sprat inside and outside the box in the survey. However there was no correlation (P=0. 9901 and P=0.9063) between the mean weight of herring per kg sprat measured from survey IBTS data and those in commercial samples in the same rectangle in 2014 and 2015. From those observations and recognizing the extended distribution juvenile herring in the North Sea (well beyond the sprat box — STECF 2007) it is not clear why juveniles would be smaller inside the box than outside.

STECF concludes that while the ICES advice from 2017 might suggest that herring bycaught inside the sprat box were smaller than those outside, the data analysis does not confirm such an inference, and remains inconclusive. A non-significant >40% reduction in number indicates a very large variability of fish numbers in the samples, making it difficult to fully interpret the results and compare the two metrics. A further analysis comparing the mean weight of fish could have helped balance the uncertainty linked to the level of significance value.

STECF PLEN 20-03 further observes that for the two years of experimental surveys (2014-2015) analysed by ICES in 2017, the rate of herring bycatch in weight per volume of sprat caught varied substantially, with monthly values in a range of 7%-26% in 2014, whilst they were in the range of 0.7%-3% in 2015.

Supporting information accompanying the current joint recommendation

New information was made available to STECF by the Danish Fisheries Agency accompanying the new joint recommendation that seeks to extend the removal of the sprat box. This information provides bycatch rates by species in the entire Danish Industrial fishery for Sprat in the North Sea in summer 2020 from 1 July to 31 August 2020. This coincides with the time period when the sprat box would have been closed in previous years.

According to the information provided, a total of 31 vessels participated in the fishery, operating either inside, outside or both inside and outside the sprat box. The information was based on the logbooks of this trawlers fleet (OTB- Otter trawls– bottom-, OTM -- Otter trawls midwater--, PTM-- Pair trawls – midwater--) fishing for Sprat with codend mesh size of less than 32 mm (16-18 mm and 22 mm). Fishing trips were grouped according to whether the vessel was fishing in the sprat box, outside the sprat box or in both areas. The landings by species were taken from sales notes data.

The data are only available in terms of weight and not in terms of numbers. Summary results are presented in the Table 6.5.3.

Table 6.5.3: From top to bottom mean, standard deviation and number of fishing trips for the Bycatch rates of Herring per tons of landed Sprat in the Danish fishery for Sprat in July & August 2020, by gears

Arithmetic mean (BycatchRate	Gears			
Gears	OTB	OTM	PTM	Total general
inside		0.022	0.019	0.020
Outside	0.014	0.017	0.035	0.020
Total general	**0.014**	**0.018**	**0.027**	**0.020**

Standard Dev. (BycatchRate)	Gears			
Gears	OTB	OTM	PTM	Total general
inside		0.035	0.015	0.025
Outside	0.017	0.031	0.077	0.044
Total general	**0.017**	**0.032**	**0.054**	**0.040**

Observations (trips)	Gears			
Gears	OTB	OTM	PTM	Total general
inside		22	32	54
Outside	16	88	28	132
Total general	**16**	**110**	**60**	**186**

On average herring bycatches represented about 2% of the sprat catches, both inside and outside the Sprat box. As the distribution is not normal a log transformation was applied to the data (Figure 6.5.2).

The statistical analysis showed either no difference or marginal differences of the bycatch rates of herring inside/outside, depending on the set of data used.

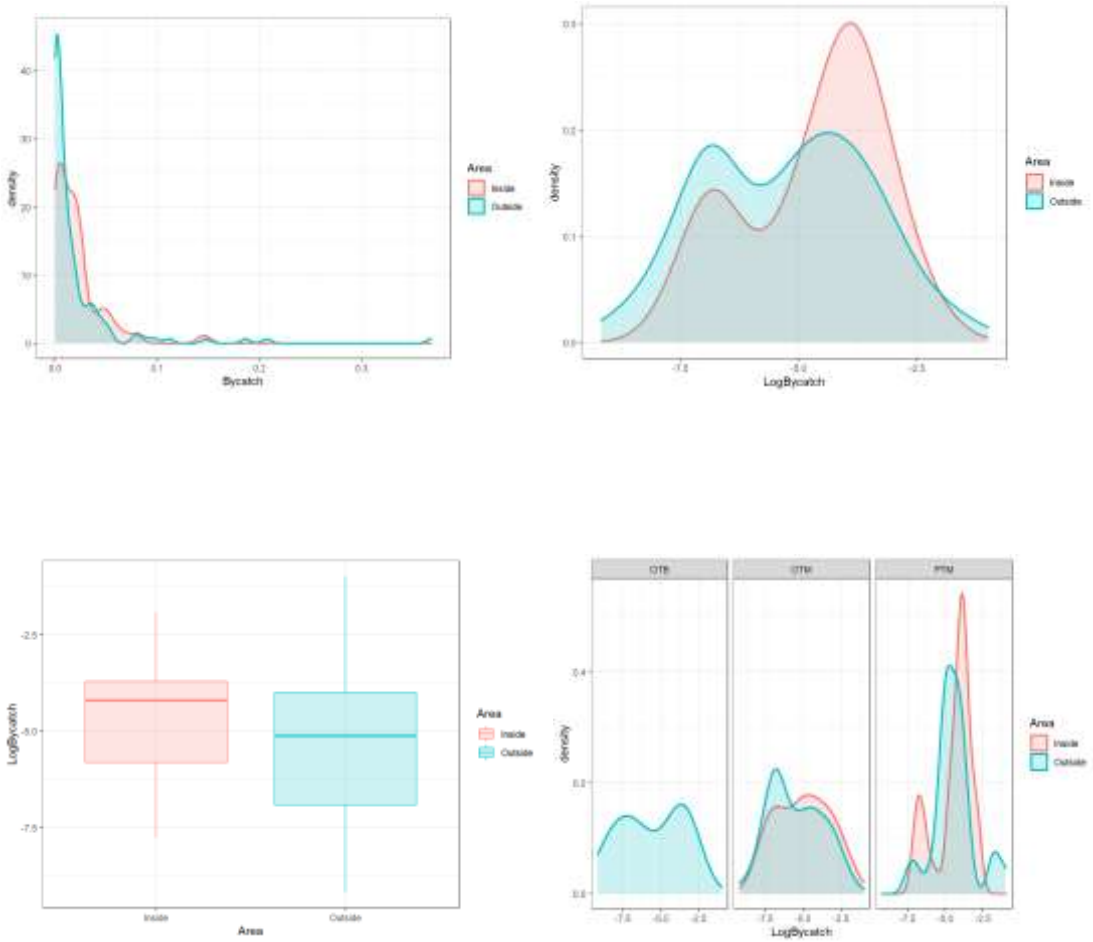


Figure 6.5.2: Bycatch rates of herring in the Danish fishery for Sprat : Distribution in natural and log scales (upper left and right panels respectively) and Boxplot by areas (bottom left panel) and distributions by areas and gears in log scales (bottom right panel).

As the fishery using OTB (bottom otter trawls) only operated outside the Sprat Box, an Anova of the bycatch rates in Log scale based only on the OTM (single pelagic trawls) and PTM (pair pelagic trawls) was carried out. The absolute level of herring bycatch equated to about 2% of the sprat catches by weight (2.03% inside and 2.11% outside). The analysis in log scale resulted in a non-significant difference (P=0.0547) between herring bycatch rates inside and outside the Sprat Box.

The results indicate that in the Danish fishery for sprat there was no significant difference in the proportion of herring in catches taken inside and outside the sprat box for the gears operating in both areas (OTM and PTM). In both areas, the catches of herring on average was about 2% by weight of the sprat catches. The sign of differences between areas were even opposite by gears (OTM, PTM). There is thus no clear difference in mean percentage of herring in weight by areas (inside/outside).

STECF comments

STECF notes that the data provided by the Danish Fisheries Agency covers the entire Danish fishery for sprat inside and outside the box in July-August 2020. The data reports bycatch in tonnes per trip. No information on the bycatch in numbers was available (which might have been valuable to assess whether the mean size of the bycaught herring differs inside/outside the Sprat box). This would facilitate assessing the question of selectivity raised from the above analysis of the ICES (2017) advice).

STECF notes that the Sprat box has been suspended since June 2017, but no catch data from the fishery during Q3 of 2017-2019 have been provided. According to the Danish Fisheries Agency's, this is due to the sampling plan for the weighing of fisheries products landed in unsorted industrial catches not being approved until 2020 (They were examined in STECF 2020 --PLEN 20-02).

STECF notes that the provided information refers only the Danish small mesh size industrial fishery on sprat, but no information was made available on the level of effort and by catches within/outside the Sprat box produced by other gears (static gears and purse seines) as mentioned in the derogation included in the pelagic discard plan (Regulation (EU) 2017/1393).

STECF comments on the expected impacts arising from the repealing of the "Sprat Box"

- Potential Impacts on Herring

STECF notes that the protection of juvenile herring from fishing in the industrial fishery was the major reason for setting up the Sprat Box and hence this is the main objective to assess when reviewing the proposal to remove the Sprat Box.

STECF observes, however, that several analyses carried out since the setting up of the Sprat Box have pointed out that the major driver of the strong reduction of the fishing mortality on juvenile herring after 1996 was the introduction of a bycatch ceiling (TAC) for herring for the small meshed fishery in the North Sea (Baron 2002 in STECF 2007, ICES 2017), rather than as an effect of the Sprat Box.

STECF notes that the fishing selectivity on herring by ages (ICES 2020) indicates that fishing mortality at age 0 is minimal, both in absolute terms and relative to older ages (around F=0.05, with F0/Fbar for years 2017-2019 of 0.0088, of 0.0080 and of 0.0088 respectively). Fishing mortality (Fbar) has been below Fpa and Fmsy for more than 20 years, and the herring spawning stock biomass has been assessed in 2020 to be just below Bpa, for the first time in about 20 years. STECF observes that after 3 years of the temporary reopening of the Sprat Box to the pelagic industrial fishery using nets with mesh sizes smaller than 32 mm, based on the information provided and asessments carried out, there is no indication of an increase of the fishing mortality on herring juveniles or on Fbar.

The comparison of the results from the two years of the experimental fishery in 2014 & 2015 and the monitoring of the regular fishery in 2020 leads STECF to note that:

- The bycatch rate of herring can vary substantially between years. The level of bycatch in summer 2020 (of about 2%) was around the same level as observed in the experimental fishery in 2015 (ranges 0.7%-3%), and lower than the range observed in the experimental fishery in 2014 (7%-26%).

- The differences in bycatch of herring inside and outside the sprat can vary differently between years and between gears.
- The data from the industrial fishery in 2020 does not support the 2014 and 2015 observation of smaller bycatch rates of herring inside compared to outside the Sprat box. Additionally, in the experimental fishery in 2014 and 2015, when results were analyzed for each year separately, the difference in bycatches inside/outside was significant only in 2015, not for 2014, though the sign of the difference was the same for the two years (ICES 2016).
- In the 2020 industrial fishery there is no significant difference in bycatch rates of herring inside or outside the box. Therefore ICES (2017) conclusion that "*fishing inside the sprat box would be expected to reduce unwanted catches of herring (by weight) compared to fishing outside*" is not supported by the 2020 fishery data.
- As the 2020 fishery data does not report on the bycatch in numbers, no inference can be made on the actual sizes of the herring being discarded inside versus outside the sprat box.

STECF notes that the effect of allowing purse seine catches and static gears within the sprat box cannot be assessed from the data made available to STECF, which only refers to the industrial fishery. However, STECF notes that the use of these gears has not resulted in an increase in the catches of juvenile herring inside the box.

Based on the available information, STECF considers that there is no indication that lifting the Sprat Box has caused any detectable additional mortality on herring.

However, in the absence of catch data in numbers it is not possible to determine, whether the B-fleet may result in higher catches in numbers among the smallest juvenile herring when operating inside the box than outside.

To fully discount such a possibility, additional years of fishery data monitoring would be required including information on herring bycatch both in weight and in numbers per kg sprat, or length distributions sampling from the herring bycatch inside and outside the sprat box.

- Potential impacts on Sprat

STECF notes that the sprat stock in the North Sea has been above Bpa and MSY Btrigger since 2014. After 3 years of the provisional reopening of the Sprat Box to the pelagic industrial fishery using nets with mesh sizes smaller than 32 mm, there is no indication in the assessment of an increase of the fishing mortality on the North Sea sprat. Fbar(1-2) 2017-2019 are 1.4, 1.24, 1.015.

According to this information, there is no indication that lifting the Sprat Box would cause any deterioration of the fishing pattern of the sprat fishery.

- Expected Impacts on ecosystem

According to the Technical Measures Regulation (Regulation (EU) 2019/1241) article 15 d: the technical measures should lead to such benefits for the conservation of marine biological resources that are at least equivalent, in terms of exploitation patterns and the level of protection provided for sensitive species and habitats, to the measures referred to in paragraph 1. The potential impact of fishing activities on the marine ecosystem shall also be considered.

STECF is unable to assess whether lifting the box will have any detectable, additional detrimental effects on sensitive species and habitats

STECF conclusions

- *ToR 1) Whether, based on the information provided with the JR, the lifting of the sprat box as set out in Annex V, Part C, point 4 of the Technical Measures Regulation would ensure levels of protection that are at least equivalent to what is currently in force*;

STECF concludes that based on the information available, there is no clear indication that the lifting the Sprat Box since 2017 has caused any damage on the herring stock. However, STECF does note that the ICES (2017) statement that "fishing inside the sprat box would be expected to reduce unwanted catches of herring (by weight) compared to fishing outside" is not supported by the 2020 fishery data.

STECF concludes that based on the years of observations now available (two of experimental fishery 2014-2015 and the ordinary fishery in 2020), it is unlikely that lifting the sprat box would lead to lower levels of protection than what is currently in place. However, given the variability of results between years, and in the absence of catch data in numbers it cannot be fully discounted that the industrial fishery may result in larger amount of bycatch in numbers of juvenile herring when operating inside the box than outside.

STECF concludes that with the data and information available, STECF is unable to assess whether any detectable, direct, detrimental impacts on the marine ecosystem are likely to arise if the sprat box regulation is repealed.

- *ToR 2) If the STECF assessment of the above is inconclusive based on the evidence provided, STECF should set out why it cannot come to a definitive answer and assess which additional scientific information would be needed to prove that the equivalent levels of protection will be maintained.*

STECF concludes that to clarify this issue more years of fishery monitoring is needed. If the decision is made to lift the box, then STECF suggests that the impact of the lifting is re-evaluated. STECF suggest this evaluation be carried out after three years of monitoring. This monitoring should include information on herring bycatch both in weight and in numbers per kg sprat or including length distributions sampling from the herring bycatch inside and outside the sprat box, to allow verifying that no deterioration of the selectivity on herring juveniles (in numbers) has occurred.

STECF concludes that as the lifting of the sprat box also affects other towed gears with a codend mesh size of less than 32 mm or static nets less than 30 mm mesh size, as well as purse seines, the actual level of effort and by catches within the Sprat Box from other gears (static gears and purse seines) versus catches outside should also be reported.

References

COMMISSION DELEGATED REGULATION (EU) No 1395/2014, of 20 October 2014 establishing a discard plan for certain small pelagic fisheries and fisheries for industrial purposes in the North Sea. Official Journal of the European Union, L 370/35.

COMMISSION DELEGATED REGULATION (EU) 2017/1393, of 24 May 2017, amending Delegated Regulation (EU) No 1395/2014 establishing a discard plan for certain small

pelagic fisheries and fisheries for industrial purposes in the North Sea. Official Journal of the European Union, L 197/1.

EU. 1998. COUNCIL REGULATION (EC) No. 850/98 of 30 March 1998 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms. Official Journal of the European Union, L 125/1.

EU. 2009. COUNCIL REGULATION (EC) No 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy,… Official Journal of the European Union, L 343/1.

EU. 2013. REGULATION (EU) No 1380/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. Official Journal of the European Union, L 354/22.

EU. 2017. COUNCIL REGULATION (EU) 2017/127 of 20 January 2017 fixing for 2017 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters. Official Journal of the European Union, L 24/1.

EU. 2019. REGULATION (EU) 2019/1241 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 June 2019, on the conservation of fisheries resources and the protection of marine ecosystems through technical measures. Official Journal of the European Union, L 198/105

ICES. 2016. Report of the Herring Assessment Working Group for the Area South of 62°N (HAWG), 29 March-7 April 2016, ICES HQ, Copenhagen, Denmark. ICES CM 2016/ACOM:07. 867 pp.

ICES 2017. ICES Special Request Advice on the EU request to assess the effects of lifting the "sprat box". Published 29 March 2017. Version 2: 10 April 2017. sr.2017.06. https://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/Special_requests/eu.2017.06.pdf

ICES. 2020. Herring Assessment Working Group for the Area South of 62° N (HAWG). ICES Scientific Reports. 2:60. 1054 pp. http://doi.org/10.17895/ices.pub.6105

STECF 2017 Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of the landing obligation joint recommendations (STECF-17-08). Publications Office of the European Union, Luxembourg, 2017, ISBN 978-92-79-67480-8, doi:10.2760/149272, JRC107574

STECF 2020. Scientific, Technical and Economic Committee for Fisheries (STECF) – 64th Plenary Report (PLEN-20-02). Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-21081-8, doi:10.2760/325560, JRC121501

STECF. 2007. Evaluation of closed area schemes (SGMOS-07-03). Commission staff working document. Subgroup on management of stocks (SGMOS), of the Scientific Technical and Economic Committee for Fisheries (STECF). STECF opinion expressed during the plenary meeting of 5–9 November 2007, Ispra, Italy. 145 pp. https://stecf.jrc.ec.europa.eu/documents/43805/44876/07-09_SG-MOS+07-03+-+Evaluation+of+closed+areas+II.pdf

6.6 Assessment of a Joint Recommendation concerning technical measures for the conservation of fishery resources of the North Sea ("plaice box")

Background provided by the Commission

The new Technical Measures Regulation (Regulation (EU) 2019/1241) introduces the possibility for regional Member State groups to amend certain regional baseline selectivity standards on the basis of the joint recommendations (JR), based on which the Commission is empowered to implement delegated acts. This permits the tailoring of detailed and technical rules so as to take into account regional specificities. The alternative measures should as a minimum lead to such benefits for the conservation of marine biological resources that are at least equivalent to the ones provided by the baseline standards, in particular in terms of exploitation patterns and the level of protection provided for sensitive species and habitats.

For many years, the so-called "plaice box" has restricted fishing to protect undersized plaice for certain vessels in certain parts of the North Sea. This measure was initially set out in the former regulation on technical measures (EC) 850/98, which was superseded by the new Technical Measures Regulation (EU) 2019/1241, which sets out the measures concerning the plaice box in Annex V, Part C, point 2. In transferring the measures, changes were made regarding the substance of the provisions, so that the current rules no longer reflect what was previously set out in (EC) 850/98. The JR therefore asks the Commission to amend the provisions in order to better reflect the previous status quo.
In particular, Member States ask to reintroduce an exemption for vessels whose engine power exceeds 221 kW using Danish seines, provided that such vessels comply with the mesh sizes referred to in Annex V, Part B, point 1.1. Under Regulation (EC) 850/98, vessels above 221 kW using Danish seine were allowed to fish in the Plaice Box, without additional requirements concerning catch composition. Member States reason that the engine power using Danish seine does not have an impact on the fishing operation, that the biological circumstances in the Plaice Box have not changed, and that plaice is biologically in a very good state.

Secondly, the current Technical Measures Regulation Annex V, Part C, point 2.2 (c) allows certain vessels using bottom trawls to fish in the plaice box under certain conditions. Member States request changing this exemption to refer to "bottom otter trawls".

Finally, the current Technical Measures Regulation requires vessels permitted to fish in the plaice box under an exemption to be included in a list to be provided to the Commission. Member States ask to return to rules under the previous regulation, which explicitly stated that the length of beam trawlers newly included in the list shall not exceed 24 metres.

Therefore the STECF is asked to analyse the effects of the attached Joint Recommendation on the ecosystem, paying special attention to consistency with the provisions of Article 15(4) (5) and (6) of the Technical Measures Regulation and achieving the objectives and targets set out in Articles 3 and 4 of the Technical Measures Regulation.

Background documents are published on the meeting's web site on: https://stecf.jrc.ec.europa.eu/plen2003

Request to the STECF

STECF is requested to evaluate the scientific information supporting the joint recommendation on the plaice box in the North Sea, paying particular attention to Article 15(4) (5) and (6) of the Technical Measures Regulation. STECF should assess to what extent the joint recommendation helps at achieving the objectives and targets set out in Articles 3 and 4 of the Technical Measures Regulation.

In particular, STECF is requested to assess:

- Whether, based on the information provided with the JR, the reintroduction of the specific exemption for Danish seine as set out under the old technical measures regulation (EC) 850/98 would ensure levels of protection that are at least equivalent to what is currently in force;
- Whether changing the provisions under Annex V, Part C, point 2.2 (c) to refer to "bottom otter trawls" instead of "bottom trawls" would ensure levels of protection that are at least equivalent to what is currently in force;
- Whether introducing a provision under Annex V, Part C, point 2.4, limiting the length of beam trawlers newly included in the list to a maximum of 24 metres would ensure levels of protection that are at least equivalent to what is currently in force;
- If the STECF assessment of any of the questions above is inconclusive based on the evidence provided, STECF should set out why it cannot come to a definitive answer and detail what additional information or data would be needed to assess the joint recommendation further, specifically to conclude that equivalent levels of protection will be maintained between any new measures and those currently in force.

Documents provided by the Commission and reviewed by STECF

The documents provided and reviewed by STECF consisted of the following:

- A Joint Recommendation submitted by the Scheveningen Group concerning technical measures for the conservation of fishery resources in the North Sea, which focused on changes to the Plaice Box contained in Annex V Part C point 2 of Regulation (EU) 2019/1241.
- Supporting information regarding the request for a refined definition of the gear types and vessel length of beam trawlers allowed inside the Plaice box.
    - Annex I – Description - Danish Seine and the environment
    - Annex III - Miljøskånsomhed og økologisk bæredygtighed i dansk fiskeri, Gislason et al. DTU Aqua report nr.279-2014
    - Annex III - Courtesy translation of relevant parts of the report Miljøskånsomhed
    - Annex IV – Dinesen, G., Rathje, I.W., Hojrup, M., Bastardie, F., Larsen, F., Kirk Sorensen, T., Hoffmann, E., Eigaard, O.R. 2018. Individual transferable quotas, does one size fit all? Sustainability analysis of an alternative model for quota allocation in a small-scale coastal fishery. Marine Policy 88: 23-31.
    - Beare, D., Rijnsdorp, A.,Blaesberg, M., Damm, U., Egekvist, J., Fock, H., Kloppmann, M.,Rökmann, C., Schroeder, A., Schulze, T., Tulp, I., Ulrich, C., van Hal, R., van Kooten, T. and Verweij, M. 2013. Evaluating the effect of fishery closures: Lessons learnt from the Plaice Box, Beare et al. Journal of Sea Research 84: 49-60.

STECF comments

The "Plaice Box" is a closed area in the North Sea, established in 1989 as a technical measure to protect undersized plaice (*Pleuronectes platessa*) and reduce discarding. The measure introduced under Regulation (EC) 850/98, restricted access of trawl, beam trawl and seine net vessels >221kW, with the aim that yields, and the spawning stock biomass of plaice would increase. An amendment to the Regulation in 1999 provided an exemption for Danish seine vessels with engine power >221kW, provided that the mesh size used was at least 100 mm. No requirements on catch composition were included.

Regulation (EC) 850/98 was repealed by Regulation (EU) 2019/1241. Annex V Part C point 2.1 ("Plaice box states that the following vessels are permitted to fish in the area referred to in

(a) vessels whose engine power does not exceed 221 kW using bottom trawls or Danish seines;

(b) paired vessels whose combined engine power does not exceed 221 kW at any time using bottom pair trawls;

(c) **vessels whose engine power exceeds 221 kW** shall be permitted to use **bottom trawls** or **Danish seine**, and paired vessels whose combined engine power exceeds 221 kW shall be permitted to use bottom pair trawls **provided that such vessels do not engage in directed fishing for plaice and sole and comply with the relevant mesh size rules contained in Part B of this Annex.**

The Scheveningen Group states that the provisions in Annex V differ from the provisions in Regulation (EC) 850/98 and create new restrictions that were not previously in place and creating a degree of ambiguity in relation to the vessels and gears exempted from the provisions of the Plaice Box.

Accordingly, under the provisions set out in art 15.2 of Regulation (EU) N°2019/1241, the Scheveningen Group has requested that the Commission adopt a delegated act to amend the provisions set out in Annex V, Part C, point 2 of Regulation (EU) N°2019/1241 and has submitted a Joint Recommendation to this effect. Specifically, they request that the following text be amended:

2.2. The following vessels are permitted to fish in the area referred to in point 2.1:

(a) vessels whose engine power does not exceed 221 kW using bottom trawls or Danish seines;

(b) paired vessels whose combined engine power does not exceed 221 kW at any time using bottom pair trawls;

(c) vessels whose engine power exceeds 221 kW shall be permitted to use bottom **otter** trawls ~~**or Danish seine**~~, and paired vessels whose combined engine power exceeds 221 kW shall be permitted to use bottom pair trawls provided that such vessels do not engage in directed fishing for plaice and sole and comply with the relevant mesh size rules contained in Part B of this Annex.

(d) vessels whose engine power exceeds 221 kW using Danish seines provided that such vessels comply with the mesh size referred to in point 1.1. of Part B of this Annex.;

They further request that the following text be amended:

2.4. Vessels permitted to fish in the area referred to in point 2.1 shall be included in a list to be provided to the Commission by each Member State. The total engine power of the vessels referred to in point 2.2(a) within the list shall not exceed the total engine power in evidence for each Member State at 1 January 1998. The permitted fishing vessels shall hold a fishing authorisation in accordance with Article 7 of Regulation (EC) No 1224/2009. **The length overall of beam trawlers newly included in the list shall not exceed 24 metres.**

STECF comments

Q1. Whether, based on the information provided with the JR, the reintroduction of the specific exemption for Danish seine as set out under Regulation (EC) 850/98 would ensure levels of protection that are at least equivalent to what is currently in force?

After clarification from DGMARE, STECF interpreted the first question as: Whether, based on the information provided with the JR, the reintroduction of the specific exemption for Danish seine would ensure levels of protection that are at least equivalent to what is currently in force in Regulation (EU) N°2019/1241.

STECF underlines that the wording "Danish seine" may be imprecise as it is sometimes used in a broad sense encompassing all types of seine nets excluding purse seines. To remove any potential ambiguity, it should be made clear that "Danish seine" here refers only to Danish "anchor seine" (gear code SDN) and not to "Scottish" or flyshooter/flydragger seines (gear code SSC).

STECF notes that a key element of the plaice box (after being established in 1989) was that larger beam trawlers with >221kW should no longer be allowed to fish in the area. Therefore, the total beam trawl effort directed at plaice and sole fell substantially and the area is now still mainly fished in by *Crangon* shrimp trawlers with engine power <221kW as well as to a minor extent by Danish gill netters (Beare et al. 2013).

STECF notes that the status of the North Sea plaice stock is very good. In its most recent advice ICES states that "*The spawning-stock biomass (SSB) is well above MSY Btrigger and has markedly increased since 2008, following a substantial reduction in fishing mortality (F) since 1999. Recruitment in 2019 is estimated to be the second highest in the time-series. Since 2009, fishing mortality has been estimated below FMSY"*.

STECF observes that information from FDI database shows that in 2019 Denmark had 122 vessels using anchor seine (SDN) and 28 vessels using Scottish seines (SSC). Total fishing days for the different seines were 2235 and 710 respectively.

STECF notes that in 2018- August 2019 three Danish vessels above 221 kW using Danish seines have fished in and around the 'Plaice Box'. The access for these vessels to the 'Plaice box' has been restricted since the entry into force of the new Technical measures Regulation from August 2019. Therefore, the fishing operations for these three Danish

vessels above 221 kW after August 2019 have taken place around the 'Plaice box'. The Scheveningen group states that ensuring the status quo compared to Regulation (EC) 850/98, as was the intention when introducing Regulation (EU) 2019/1241, would mean that these three vessels would again be allowed to fish inside the plaice box.

To evaluate whether the reintroduction of the specific exemption for Danish seine would ensure levels of protection that are at least equivalent to what is currently in force depends on the effects of these three Danish seiners on sensitive habitats and sensitive species.

Regarding the impact of Danish anchor seine on the sea bottom, STECF observes that the DTU Aqua report (Gislason et al, 2014) considers that the gears to have the greatest, immediate, degree of physical impact, are (i) mussel dredges and dredges for other shellfish. Then, in descending order, the fisheries using ii) beam trawl for plaice, iii) beam trawl for brown shrimp and bottom trawl for Norway lobster and mixed demersal fish for consumption; prawns; Norway pout; cod and plaice, (iv) Scottish seine for cod and haddock (SSC), (v) bottom trawls for sandeel, herring and sprat and **Danish seines for plaice and cod (SDN)**; (vi) Bottom-set gillnets, creels, pots and bottom-set longlines. The table below (Gislason et al, 2014) illustrates the low environmental impact of the Danish anchor seines fishing for plaice and cod in different Danish fisheries in comparison with other towed gears in the area.

Overview: environmental impact of different Danish fisheries. No of stars estimates impact. No effect = no stars. Big effect = 5 stars. - = no information available. Relative energy consuption is litres of gasoil used compared to landing value

Gear (active)	Primary target species	Depth (m)	Bottom type	Relative energy consumption	Physical bottom impact	Impact on bottom fauna and flora	Bycatch of fish/shell fish	Bycatch of seabirds	Bycatch of cetaceans	Discard
Danish seine	Plaice and cod	>20 m	SAND	**	**	**	**			*
Scottish seine	Cod and haddock	>20 m	Sand/hard bottom	**	**	***	**			*
Bottom trawl	Cod and plaice	>20 m	Mixed	****	***	***	**			**
Beam trawl	Plaice	>20 m	SAND	-	****	****	***			****

STECF notes that the maximum penetration depth of Danish anchor seines has been estimated to be <2cm (Eigaard et al., 2016). Underwater recordings of the seine rope provided qualitative results indicating that interactions with the seabed are relatively minor in nature. (Noack et al., 2019).

Regarding the impact on sensitive species, STECF notes that Danish seine is also considered to have no impact on bycatches of seabirds and cetaceans and are size selectivity with limited discards (Gislason et al, 2014).

STECF concludes that considering the limited number of vessels concerned and the limited impact that Danish anchor seine has on the bottom, the reintroduction of the specific exemption for Danish seine is not expected to have any significant effect on the level of protection. STECF notes however, that should this new text lead to a significant entry of large and efficient Danish seiners in the area, the cumulative impacts inside the area may be more substantial.

Q2. Whether changing the provisions under Annex V, Part C, point 2.2 (c) to refer to "bottom otter trawls" instead of "bottom trawls" would ensure levels of protection that are at least equivalent to what is currently in force

STECF notes that in accordance with FAO gear codes, beam trawl (TBB) is a type of 'bottom trawls' (TBB, OTB, PTB, TBN, TBS and TB). Hence Regulation (EU) 2019/1241 prescribes that all beam trawlers irrespective of engine power are currently permitted to fish inside the 'plaice box' provided that such vessels do not engage in directed fishing for plaice and sole and comply with the relevant mesh size rules contained in Part B of this Annex.

STECF PLEN 14-02 concluded that the intended effects of the plaice box on the plaice stock and on the ecosystem are not straightforward or easy to measure. However, according to Beare et al (2013), the plaice box seems to have had a positive effect on epibenthic predators. STECF notes that otter trawling generally has less physical and visual impacts on the seabed compared to beam trawling (Lindeboom and De Groot, 1998; Gislason et al. 2014, 2016, Eigaard et al., 2016 and Hiddink et al., 2017. Larger beam trawl vessels with more engine power can tow larger and heavier beam trawls compared to vessels with <221 kW.

STECF concludes that changing the provisions under Annex V, Part C, point 2.2 (c) to refer to "bottom otter trawls" instead of "bottom trawls" would prevent larger beam trawlers with >221 kW engine power to fish inside the plaice box, and thus ensure levels of protection that are at least equivalent to what is currently in force.

STECF notes that there would be socio-economic consequences, for smaller shrimp vessels, if they must compete with larger bema trawl vessels with more engine power fishing in the same area. Beare et al. (2013) highlights the importance to of considering socio-economic and political objectives when setting up the management for semi-closed areas like the plaice box. STECF notes that EWG 20-14 could, however, not fully evaluate the socio-economic benefits of the plaice box for the smaller vessels due to a lack of comparable data from the historical period previous to the implementation of the plaice box. STECF suggests it may be possible to assess the potential negative economic impact of lifting the restrictions on small shrimp vessels.

Q3. Whether introducing a provision under Annex V, Part C, point 2.4, limiting the length of beam trawlers newly included in the list to a maximum of 24 metres would ensure levels of protection that are at least equivalent to what is currently in force

STECF notes that the proposal to limit the length of beam trawlers newly included in the list of vessels permitted to fish in the 'Place box' to a maximum of 24 meters, means that the provisions would equate to that prescribed in Regulation (EC) 850/98.

STECF observes that according to public data in the EU fleet register16, Belgian and Dutch beam trawl vessels up to 24m have an engine power registered up to or equal to 221 kW but the registered kW seems largely independently of vessel length. Vessels above 24m

16 https://webgate.ec.europa.eu/fleet-europa/search_en

have registered engine power substantially higher than 221kW (above 700 kW) with a much more direct correlation between KW and vessel length. Furthermore, an EU Commission report from 2019 on engine power verification by Member States, evidenced that in those fleets, the true engine power of vessels below 221 kW often exceeds, sometimes substantially, the registered kW. The report highlights poor effectiveness and enforcement of engine power limitations by Member States. , Therefore, STECF observes that restricting the length of beam trawlers newly included in the list to a maximum of 24m would help to reduce the potential impact on the ecosystem compared to the current provisions of Regulation (EC) No 2019/1241, noting that even smaller beam trawlers below this length will have impacts.

STECF therefore concludes that the proposed addition of limiting the length of beam trawlers newly included in the list to a maximum of 24 meters would ensure levels of protection that are at least equivalent to what is currently in force.

STECF conclusions

Q1. Whether, based on the information provided with the JR, the reintroduction of the specific exemption for Danish seine as set out under the old technical measures regulation (EC) 850/98 would ensure levels of protection that are at least equivalent to what is currently in force?

STECF concludes that considering the limited number of vessels concerned and the limited impact that Danish anchor seine has on the bottom, the reintroduction of the specific exemption for Danish seine is not expected to have any significant effect on the level of protection inside the area. STECF notes however, that should this new text lead to a significant entry of large and efficient Danish seiners in the area, the cumulated impact might become more substantial.

Q2. Whether changing the provisions under Annex V, Part C, point 2.2 (c) to refer to "bottom otter trawls" instead of "bottom trawls" would ensure levels of protection that are at least equivalent to what is currently in force

STECF concludes that the proposed change of the expression "bottom trawls" to "bottom otter trawls" in Annex V, part C, para 2.2.(c) is likely to remove any ambiguity in the Regulation and provide levels of protection that are at least equivalent, and likely higher, to what is currently prescribed in 2019/1241. Amending "bottom trawls" to "bottom otter trawls" would mean that beam trawlers with an engine power >221kW would be excluded.

Q3. Whether introducing a provision under Annex V, Part C, point 2.4, limiting the length of beam trawlers newly included in the list to a maximum of 24 metres would ensure levels of protection that are at least equivalent to what is currently in force

Given the limited effectiveness of engine power limitations to restrict the actual fishing power of beam trawls registered under 221 kW, STECF concludes that restricting to <=24

m the vessel length of beam trawlers newly included in the list of vessels with <221 kW engine power that are allowed to fish in the 'Place box', will ensure levels of protection that are at least equivalent to what is currently in force in Regulation (EC) No 2019/1241.

References

European Commission. 2019. Study on engine power verification by Member States. https://op.europa.eu/fr/publication-detail/-/publication/a867cbac-8e90-11e9-9369-01aa75ed71a1

ICES. 2010. Report of the ICES-FAO Working Group on Fishing Technology and Fish Behaviour (WGFTFB), 31 May - 4 June 2010, ICES Headquarters, Copenhagen. ICES CM 2010/SSGESST:14. 252 pp

Eigaard, O. R., Bastardie, F., Breen, M., Dinesen, G. E., Hintzen, N. T., Laffargue, P., Mortensen, L. O., et al. 2016. Estimating seabed pressure from demersal trawls, seines, and dredges based on gear design and dimensions. ICES Journal of Marine Science, 73: i27–i43.

Hiddink, J. G., Jennings, S., Sciberras, M., Szostek, C. L., Hughes, K. M., Ellis, N., Rijnsdorp, A. D., et al. 2017. Global analysis of depletion and recovery of seabed biota after bottom trawling disturbance. Proceedings of the National Academy of Sciences, 114: 8301.

Noack, T., Stepputtis, D., Madsen, N., Wieland, K., Haase, S., Krag, L.A. 2019. Gear performance and catch process of a commercial Danish anchor seine. Fisheries Research 211:204-211

Https://orbit.dtu.dk/en/publications/gear-performance-and-catch-process-of-a-commercial-danish-anchor-

http://www.fao.org/3/a-bt986e.pdf

6.7 Recommendations of the Regional Coordination Groups

Background provided by the Commission

The Liaison meeting took place online on 24 and 25 of September 2020. Recommendations of the Regional Coordination Groups and the Planning Group for Economics (PGECON) were put forward.

Background documents are published on the meeting's web site on: https://stecf.jrc.ec.europa.eu/plen2003

Request to the STECF

STECF is requested to analyse the recommendations of the RCGs and PGECON in the light of their possible impact on the scientific advice process (stock assessment, annual economic report, management measures assessment) and to inform the Commission on the possible effect of the recommendations on the data coverage, quality and availability.

STECF observations

STECF acknowledges that the RCG/PGECON recommendations are brought to the attention of the STECF. Some of these recommendations have already been addressed by STECF within the revision of the multi-annual Union programme for data collection (EU-MAP, *cf.* ToR 7.3) and Work Plan/Annual Report templates and guidance (*cf.* ToR 5.9). Several recommendations relate to efforts on the (further) development of regional databases. STECF welcomes these developments as improvement of data availability for RCGs and data end-users, as well as facilitating the evaluation of national Work Plans (*cf.* ToR 5.9) and Annual Reports (*cf.* PLEN 20-02 ToR 5.3). STECF notes that the development and evaluation of Regional Work Plans has been dealt with at the EWG 20-16 (*cf.* ToR 5.9). In relation to the recommendations on workshops and other expert groups relevant to STECF work, it would be beneficial if the outcomes of these groups would be considered within the relevant STECF EWGs.

Detailed STECF comments on the RCG/PGECON recommendations are provided in the last column of the following table.

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
NANSEA BALTIC_ 2020_R01	Data gaps because of COVID 19 restrictions	ICES to either provide explicitly guidelines on how to address data gaps OR underscore clearly in the 2021 data call that imputation should not be done	ICES	By end of 2020, in time for WG's	Due to COVID19, there may be gaps in sampling data and countries need advice on how to deal with this in the stock assessments	Data gaps due to Covid-19 restrictions have to be clearly documented and their impact be dealt by the corresponding end-user groups.

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
NANSEA BALTIC_ 2020_D01	Annual RDB catch and effort overview – approve sharing and Data Policy exemptions	NC's to approve whether the overviews can be made available to WGs that have been pre-approved for access to aggregated RDB data and agree on the process	NC´s (NANS&EA and Baltic region)	30/09/2020	The RDB catch and effort overviews offer valuable information for ICES WGs and the ICES annual fisheries overview. Although all graphs are following the RDB data policy, the combination of some is violating the second rule (i.e. only the same aggregated variables should be used in the same document). Graphs can still be shared given an approval by NCs. For this approval, RCG proposes to set up a process where the overviews are sent to the respective NCs and ask for approval. That would give MS the possibility to object or re-upload data that were missing up to this point. Two ways are proposed for this. Further details can be found in section 5.2.1.1. of the report.	The STECF considers that catch and effort overviews produced by RCGs represent valuable information sources for ICES and other end-users. *N.B: This decision has been approved by DCF National Correspondents.*
NANSEA BALTIC_ 2020_R02	Update RDB Data policy	WGRDBESGOV to adjust and update the Data policy and data guidelines	WGRDBESGOV	Before 2021	The RDB Data policy is yet not covering all possible aggregation variables of the RDB data (census and sampling data). The RDB catch and effort overviews offer some new combinations that can be used to specify and update the policy to make it either more flexible or adding the missing parameter.	Not relevant for STECF (internal to RDBES process).
NANSEA BALTIC_ 2020_R03	Implement Upload-logs as standard tool into RDBES	WGRDBESGOV to set up a standardized way for the Upload logs as integral part of the Uploading process of the RDBES	WGRDBESGOV	Before 2021-22?	The Upload-logs are important documents that support the understanding and reading of the census and sampling data overviews. Yet, they are stand-alone Excel sheets with only a few standardized fields. Integrating them in the upload process will improve their usage and make the content available during the analysis of the data.	Not relevant for STECF (internal to RDBES process).
NANSEA BALTIC_ 2020_D02	Codes for metiers and reference lists that shall be used by Member States	NC's to approve whether the new codes for metiers and reference lists will be used and implemented by MS	NC´s (NANS&EA and Baltic region)	30/09/2020	The suggested métier list is standardized and harmonized codes (especially on mesh-size ranges) which will allow to avoid overlapping as well as apply similar methods and criteria on assigning metiers for fishing activities by Member States. A general workflow for assigning métiers was developed and set up a public repository on GitHub for storing reference lists, scripts, métier descriptions and documentation of procedures. R-script for assigning métiers to transversal data was developed and tested by ISSG.	Not relevant for STECF (internal to RDBES process).
NANSEA BALTIC_ 2020_R04	Advice for completing Table 5A in the national workplans	MS should take notice of the advice made for completing Table 5A: - Provide direct links to relevant documentations where possible, - Ensure any links provided are correct and work, - Ensure the documents referenced are reasonably recent (>2014), - Provide the date when the documentation was written or updated, - Provide explanations of why this is good/best practice e.g. give explicit references to any	MS	31/12/2020	The Data Quality group has developed indicators based on Table 5A. When calculating these indicators, a number of common issues have been identified - if these were resolved then the information presented in Table 5A would be more useful.	The way how planning and implementation of data quality assurance is being reported is currently under revision. This recommendation will be taken into account in the revision of the Work Plan/Annual Report templates & guidance (EWG 20-18).

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
		expert group reports that define the practices that are being followed, - Double-check whether "NA" is a legitimate answer to a particular question.				
NANSEA BALTIC_ 2020_D03	Approve changes to the RDB/RDBES Data Policy	Approve the proposed changes to the RDB/RDBES Data Policy. These changes are: i) minor changes to the text, ii) allow NCs to pre-approve access to detailed data for selected ICES expert groups, iii) minor change to the aggregation guidelines	NC´s (NA NS&EA and Baltic region)	30/09/2020	ii) A recommendation was made by the RCGs to the RDB Steering Committee to create a process whereby countries could pre-approved access to detailed data for selected users. iii) During the 2020 RCG meeting it was noticed that the current aggregation rules do not cover all of the variables used in the RCG Effort & Catch Overview reports - these missing variables should be added to the guidelines.	Not relevant for STECF (internal to RDBES process).
NANSEA BALTIC_ 2020_D04	Approve the "Conditions for detailed RDBES data use" document	Approve the "Conditions for detailed RDBES data use" document	NC´s (NA NS&EA and Baltic region)	30/09/2020	A recommendation was made by the RCGs to the SCRDB to produce a document that people within ICES expert groups who have been given access to detailed RDB/RDBES data could sign to say they have read and agree to abide by the conditions of using the data.	Not relevant for STECF (internal to RDBES process).
NANSEA BALTIC_ 2020_D05	Renewal cost-sharing agreements for surveys	To discuss, amend and conclude on renewal of the cost-sharing agreements for both the IESNS and WHB survey.	relevant NCs and MS.	30/09/2020	The current cost-sharing agreement for IESNS ends in 2020 while the agreement for the WHB survey needs revision to reflect the outcomes of the UK leaving the EU. Also, Spain is not included in the agreement, this should be reflected in the new agreement as well.	This is a decision of the Member States concerned. *N.B.: The cost-sharing agreements are currently being signed.*
NANSEA BALTIC_ 2020_R05	ICES to setup a Workshop on a "pilot FIRMOG"in 2021	ICES to setup a Workshop on a "pilot FIRMOG" in 2021 to focus as a test case on proposed changes for the International Bottom Trawl Survey (IBTS), using the analyses already been conducted on the IBTS (WGISDAA, WKNSIMP…) and prepare a suggestion for changes that can be brought into the RCG for decisions. The Workshop will elaborate on the ideas from ICES WKREO. The outcome of the workshop to be put forward into the RCGs for making decision on proposed changes. The decided changes to be reflected in National or Regional workplans.	ICES	end of 2020	Multiple initiatives (e.g. EU project JMP and ICES WKPIMP, WGISUR, WKNSIMP…) have considered options for developing more holistic and integrated ecosystem surveys, developing guidance and recommendations on both scientific theory and practical implementation. However, largely due to a lack of a coherent international organisational mechanism, only a small portion of this work has found its way to routine survey implementation.	Not relevant for STECF (internal to ICES).
NANSEA 2020_R06	Revision of the survey effort and coverage of the IBWSS	RCG NA NS&EA recommends ICES WGIPS to review the survey effort and coverage of the IBWSS and evaluate the impact of a 10% and 20% reduction in survey effort by Ireland and The Netherlands on the data quality of the survey indices. ICES to add this request to the ToRs of WGIPS for their work	ICES WGIPS	01/06/2021	Since the 2017 implementation of the DCF recast, the participation by MS to surveys based on TAC shares has become mandatory for surveys listed in the EU-MAP. Currently, two surveys are subject to cost-sharing; the International Ecosystem Survey in the Nordic Seas (IESNS, also known as ASH) and the International Blue Whiting Spawning Stock survey (IBWSS). The EU part of the IBWSS	Not relevant for STECF (internal to ICES).

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
		programme 2021; WGIPS to review and to summarise the results of their evaluation for the RCG NA NS&EA technical meeting in June 2021.			is being carried out by Ireland and The Netherlands. As part of a multilateral agreement, Denmark, Germany, France and the United Kingdom contribute to the ship time cost with financial contributions proportional to their relative TAC share. Since 2019, Spain is also contributing ship time to the survey, however this is outside the multilateral agreement. The IBWSS will continue to be a mandatory survey under the new EU-MAP from 2022 onwards. In order to develop new task sharing agreements for the IBWSS including cost contributions under the next EMFAF programme, the RCG NA NS&EA recommends an evaluation of the current EU survey effort including the effect of the additional survey effort by Spain since 2019 and the impact of a potential reduction of survey effort by Ireland and Netherlands by 10% and 20%, respectively.	
NANSEA BALTIC_ 2020_D06	Draft RWP - agree to non binding test run and endorse elements for test run	NC's to approve that a draft RWP is submitted to STECF in October 2020 for a non binding test run and to endorse the elements that were selected for the test run being table 1a on landing's overviews, 1g&1h on surveys, 7a on coordination, 7b on recommendations and 7c on existing bilateral agreements.	NC´s (NA NS&EA and Baltic region)	30/09 /2020	A RWP will have the same binding force as a NWP, so there is the need to have a learning phase by all involved (Member states, RCGs, DGMARE and STECF) on the agreement, submission, review and formal approval of an RWP. It is proposed to test a RWP in 2020 as a not legally binding document to learn how to deal with this new process. The ISSG RWP in collaboration with other relevant ISSGs has developed a test RWP with proposed elements of regional coordination to submit to STECF in October 2020 for review, feedback and lessons learned. This process will greatly support the subsequent preparation of the actual RWP in 2021. The elements included are table 1a on landing's overviews, 1g&1h on surveys, 7a on coordination, 7b on recommendations and 7c on existing bilateral agreements.	Draft Regional Work Plans (RWPs) for the Baltic and North Atlantic, North Sea & Eastern Arctic regions have been submitted by the RCG at the end of October 2020 (*cf*. ToR 5.9).
NANSEA BALTIC_ 2020_R07	Draft RWP - RCG recommends a non binding test run to be reviewed at STECF for feedback and lessons learned on the process of RWP submission	RCG NA NS&EA and RCG Baltic recommend for the Commission to accept a test RWP at STECF 2020 as non legally binding for review, feedback and lessons learned on the process.	DGMARE/ STECF	31/10 /2020	A RWP will have the same binding force as a NWP, so there is the need to have a learning phase by all involved (Member states, RCGs, DGMARE and STECF) on the agreement, submission, review and formal approval of an RWP. It is proposed to test a RWP in 2020 as a not legally binding document to learn how to deal with this new process. The ISSG RWP in collaboration with other relevant ISSGs has developed a test RWP with proposed elements of regional coordination to submit to STECF in October 2020 for review, feedback and lessons learned. This process will greatly support the subsequent preparation of the actual RWP in 2021. The elements included are table 1a on landing's overviews, 1g&1h on surveys, 7a on coordination, 7b on recommendations and 7c on existing bilateral agreements.	The EWG 20-16 has provided comments/feedback on the RWPs (*cf.* ToR 5.9).

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
NANSEA BALTIC_ 2020_R08	Draft RWP-RCG recommends PGECON to review NWP template tables 3a, 3b, 3c (socioeconomic data collection) and 5b (quality) for feedback	PGECON to review NWP template tables 3a, 3b, 3c (socioeconomic data collection) and 5b (quality) for feedback on structure and content as well as required changes to support the documentation of regional coordination of socioeconomic data collection towards a RWP.	PGECON	end of 2020	The ISSG RWP reviewed each table of the NWP template and identified how the regional working elements/agreements fit into the structure. If there was information that couldn‘t be captured in the current format, it was considered whether it needed to be linked to other or additional tables. The agile document with the tables and a textbox word document is in Google Doc for review and adjustment. PGECON is invited to review the tables relevant to socio economic data collection (NWP template tables 3a, 3b, 3c (socioeconomic data collection) and 5b (quality)) for feedback on structure and content as well as required changes to document regional coordination of socioeconomic data collection towards a RWP.	See comments on recommendation PGECON_R07.
NANSEA BALTIC_ 2020_D07	All MS in the Baltic area should take part of this ISSG	All RCG Baltic MS should take part of the ISSG work as all MS are exploiting the small pelagic fishery in the area.	NC's (Baltic region)	30/09 /2020	The aim is to come up with the regional sampling plan for small pelagic fishery in Baltic sea. To agree on common sampling protocol(s), proper sampling sizes, sampling intensities etc that will fulfill the end-user needs.	Not relevant for STECF (internal to RCG).
NANSEA BALTIC_ 2020_R09	Ensure administrative/technical and financial support for regionally coordinated stomach sampling	COM to start supporting regionally coordinated stomach samplings	EC	as soon as possible	Fundamental changes in natural versus fishing mortality are occurring in European waters, given e.g. reductions in fishing mortality, recovery of fish and non-fish populations, and complex environmental effects of global warming on our coastal-marine ecosystems. Stomach data presently used are often 20 years old (e.g. from the 1990s in the North Sea) or older and the lack of contemporary information on ‘who eats who’ and how the food webs have changed over time makes it increasingly difficult to provide adequate scientific advice. To ultimately improve the quality of natural mortality estimates and thus the ICES advice, regionally coordinated stomach samplings are urgently needed.	Stomach content sampling and analysis is relevant for scientific advice in terms of estimating natural mortality (*cf.* ToR 7.3 of this PLEN 20-03 report). As stomach sampling is part of the MS obligations within the revised EU-MAP, financial support via the EMFAF is eligible.
NANSEA BALTIC_ 2020_D08	ISSG proposed to work during season 2020-2021	The list of RCG ISSGs suggested by RCG NA NS&EA and RCG Baltic to be confirmed to take place during season 2020-2021.	NC´s (NA NS&EA and Baltic region)	30/09 /2020	During the second year of the new 3-year term of RCG NA NS&EA and of RCG Baltic the work under each ToR has been carried out by designated inter sessional subgroups (ISSG). The work done in ISSG have proved to be very productive and beneficial for the regional coordination. Work in ISSG needs experts and manpower (approximately 1 week of work / ISSG and person). The ISSG work force the MS to switch from working with a national focus to work with a more regional focus which is in line with idea of EU-MAP.	Not relevant for STECF (internal to RCG).

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
Med&BS_R01	Agreement on sharing detailed information on data transmission issues (DTI)	RCG MED&BS 2020 recommends sharing of detailed information on data transmission issues on MS level for the purpose of RCG MED&BS Subgroup on data transmission issues and data requirements. Detailed information on DTI per MS will be treated as confidential i.e. not to be distributed to third parties or included in RCG MED&BS reports which are publicly available. <u>Follow-up needed:</u> ● Chair of RCG MED&BS Subgroup on data transmission issues and data requirements to request DG MARE on DTI per MS from the DTMT. ● RCG MED&BS Subgroup on data transmission issues and data requirements shall analyze the DTI and provide the results to DG MARE before the STECF EWG on the evaluation of Annual Reports and DTI. ● Chair of RCG MED&BS Subgroup on data transmission issues shall provide relevant information to MS and main end-users during the RCG MED&BS End-users Meeting.	● Chair of RCG MED&BS Subgroup on data transmission issues and data requirements ● MS ● DG MARE	Yearly, starting from 2021	Agreement to share detailed information on DTI per MS is needed to avoid asking additional permission each year from MS to access and use the information on DTI for the purpose of the RCG MED&BS Subgroup on data transmission issues and data requirements and End-users Meeting. The RCG MED&BS shall use detailed information on DTI for the following purposes: -Collaborate with end-users to identify common and recurrent issues and prioritize actions to improve the quality of transmitted data and avoid data transmission failures. -Propose ways to improve the communication and feedback on DTI. -Provide feedback and assessment of DTI on a regional level before STECF evaluation of Annual Reports and DTI.	Not relevant for STECF (internal to RCG). *N.B.: Most of this was publicly available up to 2017 as 'JRC Data Coverage & Quality Report'. It was decided, however, to be discontinued in 2018 (https://datacollection.jrc.ec.europa.eu/coverage).*
Med&BS_R02	Establishment of RCG MED&BS data requirements registry	RCG MED&BS 2020 recommends the establishment of a data requirements registry for MED&BS MS. The registry shall be updated every year and shall contain the following information: - Data call / Requirement - End-user (DG MARE, GFCM, ICES, ICCAT (optional) national level, Other projects) - Deadline - Legal basis (optional) - Country - Man/days (optional) The registry should be completed at RCG level for common data requirements and at MS level for data requirements on national level. The registry for MED&BS shall be provided to DG MARE if requested. <u>Follow-up needed</u>: ● Chair of RCG MED&BS Subgroup on data transmission issues and data	Chair of RCG MED&BS Subgroup on data transmission issues and data requirements / MS / DG MARE	MS should provide information for 2020 at the beginning of 2021.	Currently, there is no complete list of data requirements either on EU or regional level. Data requirements registry is needed to avoid overlapping data-calls and deadlines for submission as much as possible taking into account data availability at MS and regional level and to try to avoid duplication of reporting of the same type of data.	This initiative should be supported and expanded to other regions in order to increase transparency on the data requirements and to avoid duplication in reporting.

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
		requirements shall request information on data requirements from DG MARE (for common data calls) and MS (for information on the national level) before each RCG MED&BS End-user meeting. • RCG MED&BS Subgroup on data transmission issues and data requirements shall analyze the information and communicate relevant information to MS and main end-users during the RCG MED&BS End-users Meeting.				
Med&BS_R03	Establishment of dedicated STECF EWG for data quality on the Mediterranean and Black Sea data call	RCG MED & BS 2020 recommends the establishment of a dedicated STECF EWG regarding data quality on the Mediterranean and Black Sea data call, which should convene before the STECF EWG on stock assessment. Follow-up needed: RCG MED&BS chairs to communicate with DG MARE on possibilities to establish dedicated EWG.	RCG MED&BS chairs, DG MARE	End of 2020 for follow-up actions.	Currently, the data quality checks done by JRC and by EWG on stock assessments only cover stocks to be assessed and not the whole set of data reported in the Mediterranean and Black Sea data call. During the EWG on stock assessment there is not enough time for interactions with the relevant MSs for resolving the detected issues, which results in high number of data transmission issues reported in the DTMT for the Mediterranean and Black Sea MS. Therefore, a dedicated EWG is needed to check the data quality of submitted data, validate data and interact with the relevant MS, as there is not enough time for this task during the EWG on stock assessment.	STECF supports the establishment of a dedicated EWG regarding data quality from the Mediterranean and Black Sea data call.
Med&BS_R04	Timeliness of the availability of DCRF templates on the GFCM DCRF online platform	RCG MED & BS 2020 recommends to GFCM that the DCRF templates for reporting on the DCRF online platform are made available to MS earlier if possible. Follow-up needed: RCG MED&BS chairs to communicate with DG MARE	RCG MED&BS chairs, DG MARE	End of 2020 for follow-up actions.	Each year the GFCM adapts the templates on the DCRF online platform according to the information transmitted to GFCM by the CPCs on the selection of fleet segments and stocks. RCG MED & BS recommends that all the DCRF templates for the reference year should be made available on the DCRF platform soon after the selection of fleet segments and stocks. This would facilitate the preparation of datasets and the timely delivery according to DCRF calendar submission.	Not relevant to STECF (no comment needed, as this is related to another end-user).
Med&BS_R05	Notification procedure from DTMT	RCG MED&BS 2020 recommends the development of a notification procedure from the data transmission monitoring tool. Follow-up needed: - DTMT host should examine the possibility of establishment of such a channel for communication. - MS should ensure the administrative capacity for answering ASAP to the issues raised.	DTMT host, DG MARE, MS	2021	RCG MED&BS 2020 requests for the possibility of establishment of a procedure for notifications to the relevant MS when a new data transmission issue is uploaded in the DTMT. This will ensure the prompt reaction of the MS to provide justification or comment to the end-user on time. - The MS should be allowed to include/delete the email addresses of the people that will receive the notification.	A timely notification of MS of data transmission (DT) issues and prompt reaction of MS upon those issues would enable a more real-time treatment of DT issues, as previously recommended by STECF. Changes to the DTMT should be considered.

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
Med&BS_R06	Recreational fisheries	RCG MED&BS 2020 recommends continuation of the workshop for RF. Follow-up needed: Workshop for RF with TORs: List of species; methodologies; type of data to be collected. A common list of species for all countries. If RCG chooses other species, request confirmation of the country. Propose review and update of the list periodically.	MSs, RCG chairs	beginning of 2021 (If a physical meeting is not possible, a virtual meeting should be organized).	MS should collect data on marine RF regularly, as official statistics are missing in most Med&BS countries. Moreover, there is a need to finalize the pilot studies, assess the outcomes and use them to generate plans for regular data collection as well as to identify survey methods and data to be collected and adapted to the specific situation of each MS, based on end user's needs. Finally, a common framework for sampling methodology is needed to assure that data collected is comparable among MS. Regional coordination for data collection is needed to ensure that data provided are at the required spatial resolution, temporal coverage and quality are provided to support scientific advice and management. On this basis, a workshop on RF for the Mediterranean basin is necessary, where all countries will participate, to finalize a list of species to be sampled, methodologies and type of data to be collected.	RCG-internal; The new EU-MAP for 2022 and beyond, however, will include recreational fisheries in the regular data collection obligations (*cf.* ToR 7.3).
Med&BS_R07	Speeding up the establishment of a scientific network for sampling optimization.	RCG MED&BS 2020 recommends speeding up the establishment of a scientific network for sampling optimization. Follow-up needed: Med&BS NCs should nominate national experts for participating in the network on sampling optimization; the nominations should be communicated to the current moderator of the scientific network for sampling optimization (Ms Isabella Bitetto) and RCG Med&BS chairs.	RCG Med&BS NCs, RCG Med&BS chairs, moderators of the scientific network for sampling optimization.	31 October 2020	The 2018 RCG Med&BS agreed on the need to set up a network of experts to be trained and use the tool developed under MARE/2016/22 STREAM project on sampling stratification and optimization of biological data. It was further agreed that MS should nominate experts to be part of the network. However, the scientific network for sampling optimization has not been established so far, since most of the MS have not nominated experts to be part of the network.	The outcome of this work is relevant for progressing towards the design of Regional Work Plans (cf. ToR 5.9). Once available, it should be considered in the relevant STECF EWGs.
Med&BS_R08	Training workshop on the use of the commercial sampling optimization tools developed under STREAM project	RCG MED&BS 2020 recommends the organization of a training workshop on the use of the sampling optimization tools developed under MARE/2016/22 STREAM project. Follow-up needed: A training workshop should be organized on the use of the sampling optimization tools developed under STREAM project, addressing the needs of the national experts participating in the network for sampling optimization.	Moderators of the scientific network for sampling optimization, RCG chairs, MSs	2021 or ASAP when the COVID-19 restrictions allow a physical meeting*.	Though training workshops have been organized under STREAM project on the use of the tools developed on sampling optimization, the RCG Med&BS 2020 identifies further training needs on the use of the developed tools, following feedback with the national experts involved in sampling optimization.	The outcome of this work is relevant for progressing towards the design of Regional Work Plans (cf. ToR 5.9). Once available, it should be considered in the relevant STECF EWGs.
Med&BS_R09	Data quality	RCG Med&BS 2020 recommends applying the data quality checks developed under the WP6 of the STREAM project before submitting data to the relevant Data Calls. Follow-up needed:	RCG Med&BS chairs, RCG Med&BS NCs	2021 or ASAP when the COVID-19 restrictions	Procedures for improving and enhancing quality checks to detect and flag potential outliers and sources of bias in biological data can streamline the process of data preparation and submission to respond to the different data calls.	Not relevant for STECF (internal to RCG).

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
		To support MSs experts to familiarize with the R tools developed to perform data quality checks, the network on the sampling strategy optimization will also use those scripts during their activity. This will also streamline the training workshop in view of the network. A calendar for the implementation of the quality checks was also provided by the STREAM project (see STREAM Final Report).		allow a physical meeting*. *It should be investigated if is it possible to combine the 2 WS in one week.	WP6 of the STREAM project developed a set of quality checks to detect errors in both raw data (a priori quality checks) and in the raised data required by the end-users (a posteriori quality checks), using R-scripts. The a priori data quality checks aim at detecting errors directly on sampling data in the Regional Coordination Group for the Mediterranean and Black Sea (RCG Med&BS) formats for commercial sampling (CS format) concerning the measurements of biological variables (length, weight, maturity, sex, age) and landings. The a posteriori data quality checks are applied to the EU Mediterranean and Black Sea Data Call formats and provide information on the spatial coverage among the strata (i.e. quarter, metier) and on the assessment of the completeness of biological information. It also allows detecting records with discrepancies between the product of the number of raised individuals and individual weight at age in the landings/discards and the total landings/discards by metier, quarter, species.	
Med&BS_R10	Age reading workshop – Black Sea	RCG MED&BS 2019 recommends the organization of an Age Reading Workshop on turbot (*Scophthalmus maximus*) and piked dogfish (*Squalus acanthias*). Follow-up needed: Organization of an age reading workshop on turbot and piked dogfish.	RCG Med&BS chairs, NCs	2021	Under the work of MARE/2016/22 STREAM project (WP7), institutes involved in Data Collection in the Black Sea reported lack of age standardization on turbot and piked dogfish. Based on this finding, STREAM has proposed the organization of age reading workshops on turbot and piked dogfish. RCG Med&BS 2019 and RCG Med&BS 2020 reviewed this proposal and agreed on the need to organise age reading workshops on turbot and piked dogfish.	In a recent request to the Commission, Bulgaria questioned the obligation to sample picked dogfish on Black Sea surveys due to low occurrences. STECF (Plenary 20-01 report section 3.4), however, recommended continued data collection for picked dogfish. The limited availability of samples and involvement of Bulgaria for this species should be considered when setting up this workshop.
Med&BS_R11	Training workshop on PETS identification	RCG MED&BS 2020 recommends the organization of a Training workshop on PETS identification for all categories of PETS (marine mammals, sea birds, sharks and rays, reptiles). Follow-up needed: A training workshop on PETS identification should be organized covering all categories of PETS (marine mammals, sea birds, sharks and rays, reptiles).	RCG Med&BS chairs, NCs	2021	Under the work of MARE/2016/22 STREAM project (WP7), training needs on PETS identification have been reported for all categories of PETS (marine mammals, sea birds, sharks and rays, reptiles). Institutes with expertise in PETS identification have also been reported (available in STREAM Deliverable.7.1). STREAM has proposed RCG Med&BS to consider two training workshops on PETS identification for the period 2020-2021, one dealing with the identification of sharks and rays, and the other with the identification of marine mammals, sea birds and reptiles. RCG Med&BS 2019 reviewed this proposal and agreed to organize one training workshop on PETS identification, which will cover all categories of PETS (marine	The outcome of this work is relevant for improving the quality of PETS data. Once available, it should be considered in the relevant STECF EWGs.

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
					mammals, sea birds, sharks and rays, reptiles).	
Med&BS_R12	Continuation of Setting up of a Regional Database (RDB) for the RCG MED & BS	RCG MED&BS 2020 recommends continuation of the setting up of a Regional Database. Follow-up needed: Confirmation of the members of the Steering committee, if needed, and the second meeting of the RDB SC.	MSs, RCG chairs	End of October/beginning of November 2020	RCG MED&BS 2020 considers the development of a regional database as an urgent priority to allow for the efficient use of the data received from the official RCG data calls and avoid duplication of work.	Not relevant for STECF (internal to RCG). *N.B.: The delivery of a regional database for the Med&BS is part of a recent call for proposals - MARE/2020/08.*
LDF_R01	Updating national data to the RDB	RCG LDF recommends that MS continue to update historical data as well as most recent data prior to the 2021 RCG LDF data call. Follow-up needed: MS to update their data and promote set up of routine procedures to provide data to the RDB.	NCs of all RCG LDF MS	Prior to the RCG LDF 2021 data call	Section 3.5 of RCG LDF 2020 report	Not relevant for STECF (internal to RCG).
LDF_R02	Data collection in SPRFMO region beyond 2024	RCG LDF to set-up intersessional subgroup to prepare for data collection in the SPRFMO area beyond 2024. This subgroup shall work on a solid solution to cater for data collection under the given SPRFMO observer requirements as well as taking DCF requirements into account. The subgroup shall explore different scenarios such as accreditation for EU observers, self-sampling, remote monitoring etc. First results are presented at the 2021 RCG LDF. Follow-up needed: Setup of the subgroup, organize (virtual) meeting.	Chair of RCG LDF and MS involved in the SPFRMO pelagic fisheries.	Prior to the RCG LDF 2021 meeting	Section 6.3 of RCG LDF 2020 report	Not relevant for STECF (internal to RCG for the MS concerned).
LP_R01	Use RDBES as database	Use the database hosted by ICES (RDBES) as a common regional database for RCG-LP. Follow-up needed: NC need to approve the use of RDBES.	NCs	4Q 2020	RCG LP has approved by consensus that a common database will be used	Not relevant for STECF (internal to RCG).
LP_R02	Appoint core group members	Appoint core group members Follow-up needed: RCG-LP propose one person of each Subgroup	This group will be a bridge between RFMOs and ICES (developer	RCG-LP, NC	RCG LP has approved by consensus that a common database will be used and has selected RDBES. If this recommendation is accepted and validated during the next Decision meeting in September 2020, the RCG LP will be proposing one person of each Subgroup to be a part of the	Not relevant for STECF (internal to RCG).

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the actions	Deadline	Background for decision or recommendation	STECF comments
			s of the database)		RDBES Core group, to represent each specificity of LP fisheries.	
PGECON_R01	Rules of procedure for the RCG ECON	PGECON 2020 recommends the follow-up of the draft text of Rules of Procedure as attached to this report which was discussed during the plenary. It was also agreed that all MS may need more time to commit with the text produced, acknowledging at the same time that further delays on this issue could jeopardize the functioning and the work carried out in the RCG ECON. Follow-up needed: Draft text attached to this draft report to be provided to the LM. After providing to LM, the draft text to be circulated to NC with a deadline to send additional comments (10 November 2020). This should lead to the final adoption by a written procedure of the ROPs for RCG ECON by the end of 2020.	Chair of PGECON 2020 to provide the final draft to LM. Chair of PGECON 2020 to circulate the draft by RoPs to all NC. NC to review the draft, send comments if necessary, and finally adopt RoPs by the end of 2020.	2020	Article 9(5) of EU Regulation 2017/1004 of the EP and of the Council, on the establishment of a Union framework for the collection, management, and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) 199/2008 (recast).	Not relevant for STECF (internal to RCG).
PGECON_R02	Adaptation of Rules of Procedure by other RCGs	PGECON 2020 recommends adaptation of Rules of procedures of all Regional Coordination Groups. Follow-up needed: RCGs to consider the possibility of adaptation of their RoPs in accordance with the finally adopted RoPs of RCG ECON during the next annual meetings.	RCG chairs	2021/2022	The draft RoPs for RCG ECON were elaborated during PGECON 2020 meeting and included in the report as Annex III. According to the draft, RoPs for RCG ECON close cooperation between RCG ECON and other RCGs is needed in the drafting process of Regional Work Plans and the future workflow.	Not relevant for STECF (internal to RCG).
PGECON_R03	Revision of EU Map delegated tables	PGECON recommends accepting the revisions and comments in tables 6, 7, 8, 10 and 11 of the EU MAP delegated tables as attached to this report. Follow-up needed: EC/DG MARE to revise tables 6, 7, 8, 10, 11 of the EU MAP delegated tables as attached to this report in Annex IV.	EC/DG MARE	2020	Clarify definitions of variables Number of fishing operations; Number of nets/Length, Numbers of pots, traps in Table 6 - Fishing activity variables. Clarify note (d) in Table 6. Delete the variable group and variables of: • Production value per species from Table 7 - Fleet economic variables; • Review Length classes (0 - < 6/8/10 m; 6/8/10 - < 12 m) in Table 8 - Fleet segmentation; Ask on voluntary basis Employment by education level in Table 10 - Social variables for the fishing and aquaculture sectors. Review nomenclature of the variable groups Personnel costs and Debts in	The STECF comments on this point are included under ToR 7.3 of this PLEN 20-03 report.

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
					Table 11 - Economic variables for the aquaculture sector. Add variables Total assets in the new variable group Financial position of table 11.	
PGECON_R04	Revision of EU Map delegated tables and delegated Annex - data on the fish processing sector	PGECON recommends to revise the text of Draft Commission Delegated Decision (new EU MAP), Chapter II paragraph 7 and to include under that paragraph the reference to a revised current binding Table 11 COM 2016/1251) in order to allow MSs to collect the data for the fish processing sector on an optional basis, as fish processing data collection is established by the currently binding Regulation (EC) 2017/1004. Hence, PGECON recommends to include in the requirements for the optional provision of data on raw materials under the proposed Table (13) of the Commission Delegated Decision (Economic and social variables for the processing industry sector): Volume and value by: • Species • Production environment (Capture based fishery and aquaculture sector) • Country of Origin (Domestic, other EU or non-EU) • Type of processed material (fresh, frozen and semi-processed materials) – where possible. Follow-up needed: EC/DG MARE to replace the text of the delegated decision annex, article 7. Socioeconomic data on the fish processing sector, CHAPTER II with the following text: *Socio-economic data on the fish processing industry may be collected on an optional basis, when data collected under the European business statistics regulation as published by Eurostat are not at the correct resolution or are not of sufficient quality or coverage for the intended scientific use. In the latter case, appropriate alternative data collections should be used.* *The optional data collection should cover variables*	EC/DG MARE, MS	2020-21	In order to fulfill the objectives of the CFP, the Farm to Fork Strategy and the ongoing discussion on Methods for defining sustainable fisheries and aquaculture (next STECF EWG 20-05), PGECON **has a serious concern** that the EUROSTAT's Structural Business Statistics (SBS) data will not be appropriate for this task due to the following reasons: Eurostat data are collected for all the economic activities (but the primary sectors), and as such they are not detailed enough to capture the specificities of the fish processing sector as required for policy and analysis purposes. In particular: Eurostat data do not cover, in some countries, small enterprises (e.g. below 10 or 20 employees). For example, Eurostat data for Greece and Croatia and Ireland do not cover the overall population, contrary to the DCF that covers all the population. In Greece, enterprises below 10 employees represent around 70% of the overall population, in the case of Ireland 50%. Eurostat data are not published for all the size classes for confidentiality issues. For each reference year two size classes are obscured for all the variables: one for primary confidentiality, another one for secondary confidentiality (e.g. for Italy size class >250 for primary confidentiality, 50-249 in 2016 and 20-49 in 2017 for secondary confidentiality). Eurostat data are not collected at more geographical disaggregated levels (e.g. NUTS2) and/or segment level (e.g. canning/frozen), as it is planned in the data collection system of some MSs. For example, the Italian Work Plan foresees fish processing data collection at NUTS2 level while the Danish data provided under DCF divide the industry into species group segments for a more detailed understanding of industry dependence of different species. Eurostat data do not cover some relevant economic variables, e.g. Subsidies, important for IA analysis of the CFP (EMFF efficiency) as well as depreciation and value of assets, hence not allowing the estimation of important indicators as net profits, net value added, return on investments (RoI), etc.	The STECF comments on this point are included under ToR 7.3 of this PLEN 20-03 report.

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
		indicated in former Table 11 (new 13). *Economic data may be collected on an annual basis and social every three years, on the preceding year, counting from 2018.* EC/DG MARE to include in the revised EU MAP delegated Tables the revised Table 11 (now table 13), presented below as Annex V, including the list of economic and social variables for the fish processing sector as attached to this report. MSs to provide appropriate justification in their Work Plan for extensive or complementary to Eurostat data collection. PGECON to revise the Guidance document for better definition of socio-economic variables for fish processing. PGECON to discuss on age categories for social variables during the planned workshop.			Eurostat data do not cover the social aspects, relevant for the profiling of the overall fisheries sector (fleet, processing and aquaculture). Eurostat data do not cover the raw material used by the fish processing companies, which is a key to understand the linkages with the wild-capture fisheries, aquaculture and external trade. PGECON has also serious concerns about the possibility to leave room for "additional" to Eurostat data collection. Combining different data sources (e.g. Eurostat for economic and DCF for social) would mean combining datasets with different coverage of population, and therefore the datasets will not be comparable. Overcoming this problem is hindered by the fact that Eurostat and DCF data collections are carried out, in many MSs, by different bodies.	
PGECON_R05	Revision of the RCG ECON guidance on definition and methodologies for the fleet	PGECON 2020 recommends revising the PGECON document on definition and methodologies for the EUMAP variables to include the results of the 2019 Capital WS and the discussion during the plenary PGECON meeting. Follow-up needed: Text in the guidance document to be changed as follows: Consumption of fixed capital: *The methodological framework for the estimation of consumption of fixed capital should be coherent with the one applied for the estimation on the value of physical capital.* *1. Application of the perpetual inventory method (PIM, cross reference: https://stats.oecd.org/glossary/detail.asp?ID=2055). The key parameters to be considered in order to estimate the consumption of fixed capital within the PIM methodological framework are: the asset service life (that determine the economic depreciation rates), the retirement distribution and the depreciation function. The depreciation functions that can be applied in a PIM are: arithmetic (straight-line method) or geometric (degressive method).* *2. Alternative methods based on company surveys. These*	Chairs of RCG ECON, DG MARE	By the end of 2020	WS Capital (Salerno, 2019) highlighted that standardized methodology for capital value and deprecation costs are important to ensure consistency. However, present version of the guidance document is misleading in the methodology section because it allows subjective estimations not consistent with the definition. According to European System of National Accounts and to international standards, the PIM method is the more appropriate methodology. PGECON concludes that PIM approach should be the preferable method, but a certain degree of flexibility is needed to allow a better compliance of MS to EUMAP requirements. PGECON concluded that the guidance document should be amended to reflect this conclusion.	Not relevant for STECF (internal to RCG).

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
		alternative methods may be used if the derived estimates reflect the actual definition of net capital stock (depreciated replacement value of the vessel including on-board equipment with a useful lifetime of more than one year). *In case the PIM is not used, MS should explain and justify the application of alternative methods in the WP and in the AR.* Value of physical capital: *1. Application of the perpetual inventory method (PIM, cross reference: https://stats.oecd.org/glossary/detail.asp?ID=2055)* *2. Alternative methods based on company surveys. These alternative methods may be used if the derived estimates reflect the actual definition of net capital stock (depreciated replacement value of the vessel including on-board equipment with a useful lifetime of more than one year).* *In case the PIM is not used, MS should explain and justify the application of alternative methods in the WP and in the AR.* The updated guidance document to be published on the DCF Web page.				
PGECON_R06	Implementation of the *guidelines for the valuation of the fishing rights*	PGECON recommends accepting the conclusions from the WS on capital value regarding the implementation of the guidelines for the valuation of the fishing rights. PGECON recommends a transition period in which MS explore the possibilities to apply the guidelines in their situation. During this transition period the obligation to gather information on the value of intangible assets should only include the transferable fishing rights. PGECON also recommends that in the meantime possibilities are sought to facilitate the sharing of experiences with the application of the guidelines in the various MS and the further development of the methodology. Follow-up needed: MS should use the guidelines in the coming period, adapt them to the specific fisheries (in terms of the basic	Chairs of RCG ECON, DG MARE, MSs	2021-22	Although the usefulness of the value of intangible assets in economic analysis, the evaluation of not transferable fishing rights is a data intensive exercise that is not easily implemented. In order to take this issue forward, the PGECON concluded that optimally the value of intangibles should include the value of all (transferable and not transferable) fishing rights, but that in the current situation this is not possible as valuation of all right need additional data collection and methodological development to be carried out.	Not relevant for STECF (internal to RCG).

ID	Short Description	Action to be taken recommended by the RCG	Responsible for the action	Deadline	Background for decision or recommendation	STECF comments
		assumptions to be used) and provide estimation of fishing rights. Because some methods (like the hedonic model for the evaluation of the intangibles) require additional data collection, the MS WP should be adapted to include additional data collection for the implementation of the methods proposed by the guidelines. The guidelines for the valuation of the fishing rights to be included in the guidance document on definition and methodologies for the fleet and published on the DCF Web page.				
PGECON_R07	Regional coordination in the drafting of RWP	PGECON 2020 recommends establishment of coordination process between all RCGs in regards to the drafting of Regional Work Plan (RWP). Follow-up needed: All stakeholders and relevant bodies, as well as all relevant MSs, should interact between them to create good coordination and ensure the unobstructed drafting of RWP.	RCGs, MSs, DG MARE	2020/2021	During PGECON 2020, the drafting of the Regional Work Plan process was presented as the main tool for achieving the ultimate goal was pointed out the consultations and communication process with all involved bodies and stakeholders.	Not relevant for STECF (internal to RCG).
PGECON_R08	RCG ECON workshop on social variables	PGECON recommends RCG ECON workshop on social variables, which should include, where possible, the presence of experts with different areas of scientific expertise (specifically social scientists) in order to investigate the current and future social data collection, system of social indicators and their use for assessment in different economic sectors. Follow-up needed: A workshop on social data collection should be established.	Chairs of RCG ECON 2020	2021	A refinement of existing variables with reference to breakdown and definition (Employment status, Education level, Enterprise number; unpaid labour) and addition of new ones (Payment structure; retirement age and pensions; new economic and social indices). The EU MAP Guidelines, definition and methodologies on social variables should be separated by sectors (fishing fleet, aquaculture and processing) in order to take into account the specificities of social variables by sectors (fisheries, aquaculture and processing).	STECF supports the initiative to set up a workshop on social variables, taking into account the outcomes of the STECF EWGs on social data (EWG 19-03 and 20-14 (ToR 5.4 of this PLEN 20-03 report).
PGECON_R09	Conducting of postponed workshops	PGECON 2020 recommends all postponed workshops to be held in 2021 with the possible timeframe before the annual RCG ECON meeting. Follow-up needed: • Workshop on the fisheries-based approach of fleet segmentation; • Workshop on aquaculture issues; • Quality Assurance Framework Subgroup Workshop.	Chairs of RCG ECON	2020 and 2021	Due to the situation with COVID-19 in 2020, a number of WSs were postponed. However, PGECON 2020 stressed the importance of work that should be done and the need for conducting of postponed WSs.	Not relevant for STECF (internal to RCG).

7. ITEMS/DISCUSSION POINTS FOR PREPARATION OF EWGS AND OTHER STECF WORK

7.1 Preparation/discussion on ad hoc contract 'Monitoring landing obligation revised questionnaire to Member States'

Background

Regulation (EU) No 2015/81217, known as the Omnibus Regulation, introduced an obligation for the Commission to report annually on the implementation of the landing obligation on the basis of information transmitted by Member States, the Advisory Councils and other relevant sources to the Commission. To improve reporting and facilitate the assessment of the implementation of the landing obligation, the Commission prepared a questionnaire in 2016, with assistance of the STECF, for Member States to complete. The completion of this questionnaire was highly recommended and the majority of Member States indeed voluntary completed it. This has significantly facilitated the drafting of Commission report and improved the quality of the information provided. Therefore, it was seen relevant by all stakeholders to continue with the questionnaire.

DG MARE requests the STECF each year by way of an ad-hoc contract to analyse the available information on the implementation of the landing obligation, including the Member States reports based on the questionnaire. It is apparent that the questionnaire continues to help structure the responses provided by Member States. However, STECF concluded (STECF 20-02) that the responses based on the questionnaire do not provide a full picture of the progress towards effective implementation of the landing obligation. For Member States to provide harmonised and useful reports, it is therefore necessary to reconsider the utility of some aspects of the questionnaire. For example, Member States have not reported at all on elements relating to safety at sea and in only a limited manner on the socioeconomic impacts of the landing obligation. Focus should be on developing a new template more adapted to the critical information needs and to the ability to provide that information (supply of *de minimis* and <MCRS catches).

Background documents are published on the meeting's web site on: https://stecf.jrc.ec.europa.eu/plen2003

Request to STECF

DG MARE discussed the possible redrafting of the questionnaire based upon the STECF recommendations and made the following changes (see annex). The STECF is requested to discuss, assess and give possible feedback on the redrafted questionnaire, based upon the STECF recommendations (STECF 20-02), considering the following:

- Not a complete redrafting is possible, to conserve consistency of the existing framework for continued analysis and considering the following.

17 Regulation (EU) 2015/812 of the European Parliament and of the Council of 20 May 2015 amending Council Regulations (EC) No 850/98, (EC) No 2187/2005, (EC) No 1967/2006, (EC) No 1098/2007, (EC) No 254/2002, (EC) No 2347/2002 and (EC) No 1224/2009, and Regulations (EU) No 1379/2013 and (EU) No 1380/2013 of the European Parliament and of the Council, as regards the landing obligation, and repealing Council Regulation (EC) No 1434/98

- DG MARE concluded on the difficulty of improving the assessment of the socioeconomic impact of the landing obligation, with the current available data collection.

The questionnaire will be finalized, based upon the STECF PLEN 20-03 discussion and a letter including the questionnaire will be send to Member States in December 2020 with the request to submit the reports mid-March 2021 the latest.

Following discussions at PLEN 20-03 with DGMARE, it was agreed that a specific ad hoc contract to redraft the questionnaire was not necessary and STECF addressed the request from the Commission at PLEN 20-03.

STECF observations

STECF re-iterates that the current questionnaire continues to help structure the responses provided by Member States and that the quality of the information provided by most Member States has improved since the first reports in 2015. However, STECF observers that the questionnaire is rather long and detailed. Some of the information and catch data is already provided by Member States for other purposes (e.g. Fisheries Dependent Information (FDI) and to support exemption requests), while other questions may be better referred directly to the Advisory Councils in case of stakeholder engagement and EFCA on certain control issues (e.g. Last-haul analysis). Additionally, in several cases it may be possible to merge questions or provide simple tables to assist Member States to respond.

STECF re-iterates four issues with reporting under the current questionnaire, which need to be addressed:

1. There remains a lack of consistency in the way Member States report;
2. There is a paucity of quantitative information provided on levels of unwanted catches and catches discarded under *de minimis* and survivability exemptions, as well as catches damaged by predators;
3. There is a lack of reporting on socioeconomic impacts; and
4. The lack of reporting on safety issues.

Lack of consistency: STECF notes that reporting since 2015 has remained inconsistent. According to the 2019 responses, two Member States have not reported at all for several years, while at least four others have only reported sporadically. Additionally, the quality of the information provided by Member States varies considerably. Several Member States consistently provide detailed and informative reports, backed up with quantitative data. Others simply repeat information submitted in previous years or reply in the negative to most of the questions in the questionnaire with no detail or useful information. Ensuring consistence, identifying what is new information from what is historic, and avoiding duplication in responses would make reporting on the landing obligation much more efficient and informative. STECF suggests that DG MARE makes Member States aware of this when sending out the questionnaire for 2020.

Paucity of quantitative information: STECF observes that this relates to questions 8 and 9 of the questionnaire, which request the submission of specific data on unwanted catches and catches discarded under exemptions. STECF notes that, in 2019 and 2020, the FDI EWG was requested to provide discard data for each landing obligation exemption. However, the information available in the FDI database is limited by sampling programs implemented by Member States and by the specificities of the FDI data call that are not always in line with the definition of agreed exemptions. STECF suggests that providing simple excel tables for Member States to complete may assist Member States to provide this information. An example of a table for reporting discards under each exemption (e.g. *de minimis*, high survivability, predator damage) is provided below (Table 7.1.1) and would

replace the questions referred to above in the questionnaire. Ideally data from both logbook and at-sea monitoring programmes should be provided, although there may be a reluctance among Member States to provide both.

Table 7.1.1 Table for provision of data by Member States on catches discarded under exemptions to the landing obligation

Year	**Type of exemption**	**Exemption included in regulation**	**Data source***	**Fishing Area**	**Fishing fleet /metier**	**Species discarded**	**Discards weight/Number of individuals (in case of catch damaged by predators)**
e.g. 2020	*De minimis*/High survivability/predator damage	e.g. 161/2018 Article 3 (2) Annex VI	e.g. at-sea monitoring programme/logbooks	e.g. 2,3a and 4 or 4	e.g. DTS VL24-40	e.g. COD	e.g. 10 tonnes or 150 individuals

* in cases data are available from both data sources (at-sea monitoring data collected and logbooks), both data sets should be reported. In case of observer data, it should be estimated for the entire fleet/fishery exempted.

STECF notes that the purpose of data collection under the EU-MAP is to collect data needed for the monitoring of the achievement of CFP objectives. This includes the catches landed above and below MCRS under the landing obligation and catches landed and discarded of species not covered under the landing obligation. STECF notes that formulating regional sampling working plans under the EU-MAP would provide this data. STECF suggests Member States should be obliged to collect and provide this data and failure to do so could mean the non-renewal of exemptions.

Lack of reporting on socioeconomic issues: STECF notes that since the inception of the questionnaire, Member States have not provided any information relating to the socioeconomic impacts of the landing obligation. STECF highlights that the current data collection requirements of socioeconomic variables under the EUMAP cannot provide the evidence needed for the monitoring of the landing obligation. Therefore, Member States should consider carrying out additional studies and collecting additional data for monitoring the socioeconomic impacts of the landing obligation, rather than the Commission continuing to request information from Member States through one open question in the questionnaire. It might also be more efficient to have wider international studies funded by the Commission that could involve all EU Member States, or as many countries as possible, using the same or similarly agreed methodology.

Lack of reporting on safety issues: Since 2015, STECF observes virtually no information on safety at sea issues that can be directly attributed to the implementation of the landing obligation have been reported. It is doubtful reporting in the questionnaire will change going forward, given that there is no evidence of any such issues arising, even anecdotally. STECF notes that while such issues are referred to in Article 15(14) of the CFP Basic regulation, given the lack of information reported back by Member States or other

stakeholders, the current questions should be condensed into a single question. It also may be useful to address this question directly to the Advisory Councils and Producer Organisations.

STECF conclusions

STECF PLEN 20-03 has reviewed the revised questionnaire provided by DGMARE and has attached comments under each question, which DGMARE may want to consider when revising the questionnaire as shown below.

REDRAFTED QUESTIONNAIRE TO MEMBER STATES ON THE IMPLEMENTATION OF THE LANDING OBLIGATION

Steps taken by Member States competent public authorities, producer organisations and associations to implement and comply with the landing obligation

STECF comments: The title of this section is now quite broad covering both management and control issues.

1. Have you initiated, supported, participated in or implemented any measures and/or studies relating to the reduction and avoidance of unwanted catches below MCRS through improving selectivity or spatial or temporal changes to fishing behaviour (for example, studies/pilots on gear innovation or on real time closures)? Yes/No. Please specify the measures taken or studies carried out and the status of the initiative (i.e. implemented in a Regulation or voluntary uptake).

STECF comments: *The focus of the original question was on spatial or temporal changes. It is suggested to widen this to include selectivity trials and studies. Member States have consistently reported such trials and studies under this question. An indication of the status of the measures would be useful.*

2. Which fleet segments/fisheries do these measures and/or studies apply to? What has the uptake of these measures and/or studies been in the fleet segments/fisheries to which they are applicable?

STECF comments: *Member States provide reasonable responses to this question so no need to change.*

3. Have you initiated any new changes this year to your quota management system to implement the landing obligation? Yes/No. Please specify these changes.

STECF comments: *Member States have generally provided detailed information on this question.*

4. For stocks managed through catch limits, have you observed choke issues? ~~If yes, have you conducted a quantitative analysis to measure the economic impacts of the landing obligation~~?

If yes, please give details. If no, what was the main reason not?

STECF comments: *Member States have reported relatively few choke issues actually occurring but have rather tended to highlight potential issues. However, the question is*

important given choke issues have been highlighted as one of the main impacts of the landing obligation on fishing fleets. It may be appropriate to simplify the question by removing the reference to the economic impacts as these are covered in Q.22.

5. Are fishing fleets in your Member State utilising high survivability and *de minimis* exemptions? If so which ones? ~~Have you developed cases for any new exemptions to the landing obligation (either for high survival or *de minimis*) in the development of regional joint recommendations? Yes/No~~ Please give details of each exemption used by fleet segment/fishery/gear type.

STECF comments: *It may be more appropriate to split this into two questions, distinguishing existing exemptions from additional exemptions agreed and then incorporating the second part of the question on additional exemptions with Q.6 below.*

6. Have you pursued or developed cases for any additional exemptions to the landing obligation (either for high survival or *de minimis*) recently in the development of regional joint recommendations? What studies or evidence have you collected or produced to support such a request?

STECF comments: *See comments above for Q.5.*

7. What steps did you take to ensure the amount discarded under granted *de minimis* exemptions does not exceed the permitted volume in the delegated act?

STECF comments*: This is more a monitoring and control question and could be moved to the following section or amalgamated into Q.14.*

8. What has been the utilisation of any granted *de minimis* exemptions in the fleet segment/fishery to which the exemption applies?

Please provide the total weight and proportion of catch discarded under this exemption for each fleet segment/fishery to which an exemption applies in the table provided.

STECF comments: *This question is related to the control section and could be merged with Q. 9 and the data requested included in a table (as per table 7.2.1). This would assist with reporting.*

9. Have any of your vessels utilised the provision to discard fish showing damage caused by predators? Yes/No. Please provide the total weight of catch of each species discarded for each fleet segment/fishery concerned.

STECF comments: *Member States that have such catches have generally provided quite detailed information. To help with the provision of standardised data, this could be captured in table 7.2.1 as per in Q.8.*

10. For stocks managed by catch limits, did you make use of the provisions for inter-annual or inter-species flexibility? Yes/No. Please identify which flexibility (or flexibilities) was used, and the corresponding reallocation of fishing opportunities for the stocks concerned.

STECF comments: *No comments. Member States generally provide detailed answers to this question.*

11. In the development of joint recommendations, has consultation with Advisory Councils and other relevant stakeholders taken place? Yes/No

Please outline the process of consultation with Advisory Councils.

Please outline the process of consultation with other stakeholders, if relevant.

STECF comments: *Member States generally provide a simple Yes/No answer without providing much detail. It may be worth directing this question to the Advisory Councils and other stakeholder groups as well as the chairs of the respective Member State Regional Groups. In recent years, the Advisory Councils have not replied consistently to the questionnaire and there has been little information from other industry representative groups.*

12. Following the adoption of the delegated act for a discard plan, have steps been taken to ensure adequate understanding among stakeholders of their obligations under the provisions of the act? Yes/No. Please outline the process of ensuring stakeholders understand the obligations that will apply to them.

STECF comments: *As above, this question could also be directed to the Advisory Councils as well as to the Member States.*

13. Are there any other steps not covered by the questions above that you have carried out to effect compliance with the provisions of the landing obligation? Yes/No

Please specify the measures taken.

STECF comments: *Very few responses have been received to this question. As written it is rather open-ended and focused on control measures. It could either be redrafted to refer to both management and control measures and placed just before the socio-economic section or removed altogether.*

Steps taken by Member States to ensure control and enforcement of the landing obligation

14. How is the effective control and enforcement of the landing obligation at sea and the accurate documentation of all catches ensured? Please explain the following:
    - How is control and enforcement of illegal discarding and discarding under exemptions according to the provisions of discard plans ensured?
    - How is the detailed and accurate documentation of the actual quantities discarded at sea ensured?

STECF comments: *Member States generally provide quite detailed responses to this question. Q.19 on risk-based control could be merged into this question and subsequently could be removed.*

15. Has information been provided by Member States administrations and control agencies to fishermen? Yes/no

In what format has this information taken:

- Initiatives directed to fishermen to improve compliance;
- Guidelines on the application of the landing obligation, accurate recording of catches, etc.;
- Other.

STECF Comments: *This question could be moved into the previous section with other questions on awareness raising measures rather than as a separate question. Q. 11-12 could be merged into one open question.*

16. Have guidelines been provided by Member States administrations and control agencies for inspectors? Yes/no

In what format has this information taken:

- Delivery of guidelines for inspectors on the effective and uniform application of the landing obligation;
- Seminars and trainings organised for presenting the guidelines to inspectors at national and regional level.

STECF comments: *Member States have tended to duplicate their responses under this question and include the same information as provided under Q. 11-12. Therefore, as with the previous question, this could be covered under the section on awareness raising measures and merged with Q. 15.*

17. Have new control and monitoring tools been used by Member States? Yes/no

Please supply information on:

- Control tools used in the context of the landing obligation, i.e. Remote Electronic Monitoring, traditional systems (aerial surveillance, inspections at sea), reference fleets, etc.;
- Steps towards the implementation of new tools, including remote electronic monitoring means dedicated to controlling the landing obligation, haul-by-haul recording, etc. For example, participation in any studies or pilot projects.

STECF comments: *The use of Remote Electronic Monitoring is referred to under both bullet points which is perhaps confusing. It may be preferable to merge the bullet points into one covering existing and new control and monitoring tools.*

18. Have the Member State administrations and control authorities monitored below Minimum Conservation Reference Size (MCRS) catches at and after landing ~~(traceability)~~? Yes/No

Please supply information on:

- The quantities of discards recorded by masters in the fishing logbook as "DIM" and "DIS" (by fleet segment) from 2015 to 2019;
- The quantities of below MCRS ("BMS") catches recorded by masters/representatives in landing declarations (by fleet segment) from 2015 to 2019;
- Initiatives taken to prevent below MCRS catches from being used for direct human consumption;

- Measures taken to monitor landings at fish markets/auctions adopted.

STECF comments: *In recent reports, some Member States have provided quite detailed information in response to this question. To encourage this, it would be useful to provide a table to assist and standardise reporting (see example below) The last column of this table would help to cover Q26 on the uses of below MCRS catches.*

Year	Data source	Fishing Area	Fishing fleet / metier	Species landed	Catch use	Unwanted catch landed (below MCRS)	Average price / Utilisation costs
e.g. 2020	e.g. landings declaration	e.g. 2,3a and 4 or 4	e.g. DTS VL24-40	e.g. COD	e.g. fish meal, bait, pet food etc..	e.g. 2 tonnes	e.g. €100 per tonne

19. How is it ensured that control, inspection and enforcement of the landing obligation are carried out based on risk management?

Please supply information on:

- What specific risks with respect to the landing obligation have been systematically identified?
- What sectors, vessels or persons have been identified as at risk of non-compliance?
- What measures have been implemented to limit the occurrence of these risks?

STECF comments: *As indicated above this question could be included as part of Q.14 above.*

20. Has the "last observed haul" approach elaborated by EFCA as a tool for monitoring the implementation of the landing obligation been used? Yes/No Please give details of the fisheries covered and the extent of sampling.

STECF comments: *The first part of this question is usually answered. The second part on the fisheries and sampling is rarely reported. It may be appropriate to address the second part on the details of the sampling carried out directly to Member States and EFCA.*

21. How many confirmed infringements, related to the landing obligation, have been detected at sea and at landing/marketing? Explain the nature of each confirmed infringements for each year since 2015 i.e. relevant EU legislative provision infringed and the sanctions applied, including penalty points.

STECF comments: *As redrafted, this question is now very detailed, and it is unlikely Member States will provide the information requested, given the sensitivity of such information (especially on suspected infringements). Several Member States have provided*

some information on confirmed infringements in 2019 and to encourage this it may be useful to provide a table to assist and standardised reporting.

Year	Fishing Area	Fishing fleet / metier	Type of infringement	Penalty
e.g. 2020	e.g. 2,3a and 4 or 4	e.g. DTS VL24-40	e.g. Failure to record below mcrs catch	e.g. Fine

Information on the socioeconomic impact of the landing obligation

22. Have you carried out or are you planning to carry out studies on the potential socioeconomics impacts on:
    - The catching sector;
    - Upstream businesses;
    - Processors;
    - Consumption and markets;
    - Costs for Member States;
    - If yes, please provide details. If not, what was the main reason (e.g. lack of data)?

STECF comments: *Member States have rarely provided any information related to this question and have tended to respond that it is too early in the implementation of the landing obligation to measure the socioeconomic impacts. The current data collection system does not provide data detailed enough to access economic impact of LO on the seafood supply chain. Studies incorporating as many countries as possible might be a better solution to collect this type of information.*

Information on the impact of the landing obligation on on-board safety

23. Have there been any reported incidents of overloading of vessels causing stability problems? Yes/No. Please specify the number and nature of such incidents.

Can you quantify these in terms of:

- Number of deaths or serious injuries;
- No of vessels involved as a % of the specific fleet segment.

STECF comments: *No Member State has provided a response to Q.23-26. However, as safety issues are specifically referred to in the Regulation, rather than delete these questions, a suggested compromise may be to merge Q. 23-26 and possibly Q.27 on funding into one open question.*

24. Have there been any reported incidents of overloading of vessels forcing them to return to port early? Yes/No. Please specify the number and nature of such incidents.

STECF comments: *As above*

25. Have there been any reported incidents or accidents on board vessels that can be attributable to excessive workload? Yes/No. Please specify the number and nature of such incidents or accidents.

STECF comments: *as above.*

26. Has any national legislation relating to safety on board fishing vessels arising from the landing obligation been amended or introduced? Yes/No. Please provide details of this legislation.

STECF comments: *As above.*

27. Have you provided or received any funding under Article 32 (Health and safety) of the European Maritime and Fisheries Fund18 (EMFF) or Article 3 (Eligible operations on safety) and Article 6 (Eligible operations on working conditions) of Commission Delegated Regulation (EU) 2015/531 to mitigate against potential safety issues caused by the landing obligation? Yes/No.

If yes, please specify the number of projects involved and the nature of the measures taken.

If no, have any measures been taken which have not been funded under the EMFF?

STECF comments: *As above. Several Member States have reported funding under these articles which are indirectly linked to the landing obligation, which has limited value.*

Information on the use and outlets of catches below the minimum conservation reference size of a species subject to the landing obligation

28. What have been the main reported uses and destinations for catches below MCRS?

Can you quantify these catches by species in terms of volumes, price per tonne and associated costs for the different outlets such catches have been sent?

STECF comments: *Generally, Member States provide only limited responses to this question. To standardise this data, it would be useful to provide a table to assist reporting. It may also be worth considering merging this with Q18 and capturing this information in the suggested table.*

29. Have you carried out any studies or pilot projects considering the potential uses for such catches? Yes/No. Please provide details of such studies or pilot projects.

18 Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund and repealing Council Regulations (EC) No 2328/2003, (EC) No 861/2006, (EC) No 1198/2006 and (EC) No 791/2007 and Regulation (EU) No 1255/2011 of the European Parliament and of the Council

STECF comments: *Any Member States that do respond to this question provide quite detailed information. No need to change the question, noting that in recent years the number of such studies has been reducing.*

Information on port infrastructures and modernisation of on board equipment to assist in the implementation of the landing obligation

STECF comments: *It may be useful to simplify the title for this section as suggested.*

30. Have you provided funding under Article 38 of the EMFF for modifications on board vessels for the handling of catches on board? Yes/No

Please specify the number, nature and total amount invested in such projects.

31. Have you provided funding under Article 43 of the EMFF for investment in the infrastructure of fishing ports, auction halls and shelters for the handling of unwanted catches? Yes/No.

Please specify the number, nature and total amount invested in such projects.

32. Have you provided funding under Articles 68 and 69 of the EMFF for investment in marketing measures and the processing of fishery and aquaculture products? Yes/No.

Please specify the number, nature and total amount invested in such projects.

STECF comments: *No comments, although very limited information is ever provided, and it may be possible to amalgamate the questions into one question, or in the suggested table below.*

Have you provided any financial support from EMFF? Please fill in the table below:

	Type of support	**Yes/No**	**Number of projects supported**	**Amount of support granted**	**Nature of investment**
1.	under Article 38 of the EMFF for modifications on board vessels for the handling of catches on board				
2.	Article 43 of the EMFF for investment in the infrastructure of fishing ports, auction halls and shelters for the handling of unwanted catches				
3.	under Articles 68 and 69 of the EMFF for				

	investment in marketing measures and the processing of fishery and aquaculture products				
4.	Other typo of support. Please clarify the type of support below ……..				

Information on the difficulties encountered in the implementation of the landing obligation and recommendations to address them

33. Please provide information on the following:

Operational difficulties, such as:

- Avoidance and/or selectivity insufficient to avoid unwanted catches;
- Handling, storage and processing of unwanted catches;
- Lack of funding to adapt fishing gears, vessels or port infrastructure.

Difficulties relating to monitoring, control and enforcement, such as:

- Lack of understanding or awareness of the rules;
- Difficulties implementing and monitoring *de minimis* or high survivability exemptions;
- Implementation problems with regard to control/monitoring processes or infrastructure (e.g. adaptation of ERS systems);
- Refusal to carry observers.

Difficulties in fully utilising fishing opportunities, such as:

- Problems re-allocating quota to cover catches previously not landed;
- Problems with the timing or availability of quota swaps;
- Fisheries being forced to close early due to choke problems.

STECF comments*: Some of the issues are partially covered in other questions and quite often Member States duplicate information under this section. However, it is useful to retain as a catch all section.*

7.2 STECF consultation on the draft EU MAP

Background provided by the Commission

Based on the documents delivered by STECF EWG 19-05 and EWG 19-12, the Commission has prepared draft EU MAP implementing and delegated decisions and consulted them with regional coordination group, PGECON and the Member States, through the Commission Expert Group of Fisheries Data Collection. Pursuant to Article 4(2) of Regulation 2017/1004, the Commission submits the drafts for consultation with STECF.

Background documents are published on the meeting's web site on: https://stecf.jrc.ec.europa.eu/plen2003

Request to the STECF

The STECF is requested to review the Commission draft decisions on EU MAP and provide its comments

Summary of the information provided to STECF

STECF was provided with five documents to inform its consultation (from DG MARE C3):

- *COMMISSION IMPLEMENTING DECISION (EU) …/… of XXX - establishing the list of mandatory research surveys and thresholds as part of the multiannual Union programme for the collection and management of data in the fisheries and aquaculture sectors ("11-2020 STECF EU MAP implementing decision.docx")*

  It is a legal document to repeal Implementing Decision (EU) 2019/909 from 1 January 2022 specifying the list of mandatory research surveys at sea and thresholds below which it is not mandatory for Member States to collect data from their fishing and aquaculture activities or carry out surveys at sea.

- *ANNEX to the Commission Implementing Decision - establishing mandatory surveys at sea and thresholds as part of the multiannual Union programme for the collection and management of data in the fisheries and aquaculture sectors ("11-2020 STECF EU MAP implementing Annex.docx")*

  Annex accompanying the Implementing Decision, defining the aforementioned thresholds and listing the full list of surveys at EU level by area and main target species.

- *COMMISSION DELEGATED DECISION (EU) …/… of XXX - establishing data requirements as part of the multiannual Union programme for the collection and management of biological, environmental, technical and socio-economic data in the fisheries and aquaculture sectors ("11-2020 STECF EU MAP delegated decision.docx")*

  Legal document to replace current Delegated Decision (EU) 2019/910, based on Articles 4, 5 and 24 of the Data Collection Regulation (EU) 2017/1004. It specifies data requirements for the purposes of parts of the multiannual Union programme for the collection and management of data in the fisheries sector.

- *ANNEX to the Commission Delegated Decision - on the multiannual Union programme for the collection and management of biological, environmental, technical and socio-economic data in the fisheries and aquaculture sectors ("11-2020 STECF EU MAP delegated Annex.docx")*

  Annex accompanying the Delegated Decision containing general rules applied to the data collection, required data sets, and tables specifying required species, variables and other mandatory or optional elements.

- *Tables 1 to 11 ("11-2020 STECF EU MAP delegated Tables.docx")*

  A series of eleven tables linked to the data collection requirements of the Delegated Decision.

Additional documents consulted by the STECF

Besides the aforementioned documents, STECF had to consult a series of other sources; some were pointed out by the MARE C3 focal person, while others were reports of relevant meetings that STECF experts have been involved in:

- STECF EWG PLEN 18-03 Report: Winter Plenary - overview of the state of play
- Report of Expert Group on fisheries Data Collection meeting - PGECON meeting (May 2019)
- STECF EWG 19-05 Report: Evaluation of mandatory surveys under the DCF
- STECF PLEN 19-02 Report: Summer Plenary – review of EWG 19-05
- STECF EWG 19-12 Report: Revision of the EU Multiannual Plan for data collection (EU-MAP) after 2020
- STECF PLEN 19-03 Report: Winter Plenary – review of EWG 19-12
- Report of Expert Group on fisheries Data Collection meeting - Draft delegated act on EU MAP consultation (July 2020)
- Report of Expert Group on Fisheries Data collection meeting - EU MAP delegated and implementing acts consultation (September 2020)
- Report of Expert Group on Fisheries Data collection meeting - 17th Liaison meeting (September 2020)
- Report on the implementation and functioning of Regulation (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008 (recast). COM(2020) 664 final and SWD(2020) 229 final.

STECF observations

STECF proceeded in three steps prior to reaching conclusions:

1. upon reviewing the abovementioned documents, a series of comparisons were made between the draft final EU MAP documents and the past versions to check if all comments/suggestions have been taken into account
2. at the next step all new changes introduced were identified and pointed out

3. finally, some points that still needed attention or 'flagged' as ambiguous were further discussed

STECF observes some major changes in the revised EU MAP in comparison to the existing one:

1. Pilot studies: data collection on recreational fisheries, stomach contents, social data and bycatch monitoring is to be integrated into regular data collection
2. Freshwater aquaculture: data collection on Freshwater aquaculture not optional anymore
3. Fish processing sector: no specific data collection under the EU MAP; assessments will be based on EUROSTAT data.

Specific topics needing clarification

- *Implementing Decision Annex 5.2*.
  "*Social data shall cover variables indicated in Table 9 and shall be collected every three years on the preceding year, counting from 2018 as first year of data collection.*"
  Since the revised EU MAP is to come into action from 2022, STECF questions whether a more accurate phrasing would be "*Social data shall cover variables indicated in Table 9 and shall be collected every third year with 2017 being the first reference data year*"

- *Implementing Decision Annex 7. Socioeconomic data on the fish processing sector*
  "In addition to data published by Eurostat, collected by the Member States in line with the European business statistics Regulation (EBS) and Regulation (EC) No 223/2009, Member States may collect additional socioeconomic data on the fish processing sector."
  STECF agrees that the inclusion of the short paragraph allowing MS to collect additional socioeconomic data for processing industry on the voluntary basis is a good compromise proposed by the Commission. STECF observes that PGECON is going to be granted RCG status by the end of this year. Therefore STECF notes that RCG ECON could propose the list of indicators and other data collection requirements for processing industry to be used by MS that are willing to collect additional socio-economic data.
  STECF notes that the STECF biennial report on the fish processing industry will still be based on the DCF data collection as the data call will cover data for 2018 and 2019. However, it may be useful to assess what will change when the new EU MAP will come into force for 2022 and further reports need to be based on EUROSTAT data with accompanying information from the voluntary data collection under the DCF.

- *No more pilot studies - integration into regular data collection*
  Under the 2017-2019 and 2020-2021 EU MAPs, EU Member States have to conduct pilot studies to explore and develop data-collection methods in several areas (COM/2020/664 final & accompanying document SWD/2020/229 final):
  i) Share of catches of recreational fisheries (RF),
  ii Level of fishing and impact on resources/ecosystems,

iii) Employment data by education/nationality, and

iv) Environmental data on aquaculture (CSWD Annex 9)

Besides the last one, which will be dealt outside EU MAP and under other relevant EU and national legislation, all others are to be incorporated in the revised Work Plan/Annual Report templates (cf. ToR 5.9 of the PLEN 20-03). The data variables and the level at which they should be collected will require revision of the Work Plan/Annual Report tables.

i) For recreational fisheries, a dedicated STECF EWG to assess the outcomes of the RF pilot studies has been proposed by Regional Coordination Groups to take place in 2022, and could among others define the data requirements.

ii) For the collection of stomach contents, which is conducted under 'Level of fishing and impact on resources/ecosystems', the use of STREAM19 monitoring protocols has been put forward (SWD/2020/229 final).

iii) For employment data, Table 9 in the Delegated Decision Annex is covering those needs.

These new tables will have to be discussed and agreed upon in the upcoming "EWG 20-18 - Revision of DCF Work Plan and Annual Report templates and guidelines".

- *Data on the impact of Union fisheries on marine biological resources and marine ecosystems in Union and outside Union waters (Delegated Decision, section 4.3)*

  During the most recent EU-MAP drafting, the requirement to collect stomach data changed from 'shall' to 'may': "*Data collection on the impact of fishing activities on marine biological resources and marine ecosystems **may** include additional data on food webs, comprising stomach sampling and analysis*."

  STECF considers that this amendment will have impacts on the funding available for this work, as a former obligation is now an optional task under the EU-MAP. Consequently, the availability of new predator-prey data for multispecies assessment and ecosystem considerations (food webs) is likely to be very limited (cf. also ToR 6.7 of this plenary report). STECF considers thus that the "shall" should remain in the EU map text. STECF further notes that "comprising" in this context can be slightly misleading and that this paragraph should refer to the DCF requirements on food web data, and suggests the following: "*Data collection on the impacts of fisheries on food webs **shall** include stomach sampling and analysis" (COM 2017/1004 art. 5.2.b.).*

- *Regional cooperation*

  STECF acknowledges that the EU-MAP now fully incorporates the mandate provided to Regional Coordination Groups by the DCF re-cast regulation 2017/1004 in relation to *"data to be collected, based on identified needs of end users of scientific data ('end-user needs'), including where appropriate, the species, stocks, regions, variables, methodology and frequency of data collection."* (in section 1.4 of the Delegated Decision).

19 STrengthening REgional cooperation in the Area of fisheries biological data collection in the Mediterranean and Black Sea

STECF conclusions

The revised EU MAP has been extensively discussed in numerous meetings since 2018: RCGs, PGECON, STECF EWG. In the STECF context, it has been the topic of two dedicated EWGs: "EWG 19-05 Evaluation of mandatory surveys under the DCF" and "EWG 19-12 Revision of the EU Multiannual Plan for data collection (EU-MAP) after 2020".

After a lengthy consultation process of almost three years, STECF acknowledges the significant effort exerted by all involved parties (DG MARE, STECF, RCGs, MSs) to compile the draft documents provided to STECF for consultation.

STECF concludes that all comments, suggestions, corrections, additions and deletions, made during the past three years, have been taken into account and contributed into delivering a quite comprehensive and detailed series of documents that are to replace the existing EU MAP legislative text. In particular, the increased mandate provided to regional coordination between Member States represents a strong incentive to formulate Regional Work Plans (cf. ToR 5.9 of the PLEN 20-03).

STECF concludes that it is a major step forward to make the data collection on freshwater aquaculture mandatory. It will allow STECF to give a more comprehensive overview on the status of the industry, production volumes or values and allows more comparisons between countries. STECF acknowledges that there are now cost effective data collection methods available for MS (e.g. the typical farm approach (Lasner et al. 2017)) which could limit the necessary effort for establishing a new data collection.

Finally, STECF is of the opinion that the revised EU MAP, becoming operational on 1/1/2022, is a significant improvement over the existing one.

References

Lasner T, Brinker A, Nielsen R, Rad F 2017 Establishing a benchmark for fish farming – Profitability, productivity and energy efficiency of German, Danish and Turkish rainbow trout grow-out systems. Aquaculture Research 48: 3134-3148.

8. CONTACT DETAILS OF STECF MEMBERS AND OTHER PARTICIPANTS

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

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