



# SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES – 75<sup>th</sup> PLENARY REPORT (STECF-PLN-24-01)

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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 75<sup>th</sup> plenary from 11 to 15 March 2024.

# **75<sup>th</sup> PLENARY REPORT OF THE SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (PLEN-24-01)**

**11-15 March 2024**

## **1. INTRODUCTION**

The STECF held its spring plenary on 11-15 March 2024 in the Centre Borschette, Brussels. The meeting was held as a hybrid meeting.

## **2. LIST OF PARTICIPANTS**

The meeting was attended in person by 28 members of the STECF and four JRC personnel. Seven STECF members and six JRC personell attended online. Several Directorate General Maritime Affairs and Fisheries (DG MARE) attended parts of the meeting physically or online. Section eight of this report provides a detailed participant list with contact details.

## **3. INFORMATION TO THE PLENARY**

The current STECF chair, Dominic Rihan will take up a new position as CEO of the Killybegs Fishermen's Organisation Ltd, the largest Irish Producer Organisation. He will thus resign from both the STECF's chair position and the STECF membership with effect from 1 April 2024.

The STECF elected Jenny Nord as new chair.

## **4. STECF INITIATIVES**

Given the large number of TORs provided to STECF plen 24-01, there was no time available to address STECF initiatives.

## 5. ASSESSMENT OF STECF EWG REPORTS

### 5.1 EWG 23-18 Fisheries sustainability indicators

#### Request to STECF

STECF is requested to evaluate the findings of the STECF Expert Working Group meeting and make any appropriate comments and recommendations. In particular STECF is asked to comment on the following:

- The EWG's findings and conclusions following its testing of a pilot tool that operationalises an indicator (previously developed in EWG 22-12) to score a given fisheries product in relation to the sustainability of the targeted stock / species.
- The methodology proposed by the EWG for an **indicator on the impact on sensitive species** and its scoring and, in particular, the conclusions of the EWG in terms of the feasibility and operability of that indicator.

#### STECF comments

EWG 23-18 on "Fishery sustainability indicators", met in Ispra, Italy (hybrid) from 11th to 15th December 2023. EWG 23-18 was a follow up to EWG 20-05 which investigated the first *criteria and indicators that could contribute to incorporating sustainability aspects in the EU marketing standards for fisheries products under the CMO*. Additionally, EWG 22-12 and EWG 22-13 validated the selection of some sustainability indicators and underlying methodologies for their estimation. These EWGs explored and proposed transparent methods of measuring and communicating some sustainability aspects of fisheries products along the supply chain, based on scientifically sound, simple and verifiable criteria and indicators. In particular, the investigation of the criteria on the impact on the seabed was considered as completed by the EWG 22-12.

EWG 23-18 focused on fishery seafood products, with the objectives to assess and validate the findings of two *ad hoc* contracts which defined specific indicators and grading for two criteria, respectively (i) impact on the targeted stock (fishing pressure) and (ii) impact on sensitive species.

STECF observes that the EWG adequately addressed the TORs.

STECF notes that the methodologies suggested by the two *ad hoc* contracts was appropriate and served as proper input to the work of EWG 23-18. EWG 23-18 identified some challenges in implementing the IT tool<sup>1</sup> developed by the *ad hoc* team to operationalise the indicator on fishing pressure, primarily arising from difficulties in combining various data sources due to disparities in data availability and the level of variable (dis)aggregation.

STECF notes that EWG 23-18 made suggestions to develop solutions to these issues, and made several recommendations aimed at enhancing the IT tool's functionalities and data integration capabilities. STECF supports that these suggestions and recommendations need to be considered for the next steps in implementing the scoring process.

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<sup>1</sup> The IT tool calculates the stock sustainability grading of fisheries products marketed in the EU.

STECF notes that EWG 23-18 recommended an annual update of data from three identified sources (Balance Capacity STECF working group database, ICES Stock Assessment, Stock SMART NOAA). The suggested timeframe for these updates is December each year. Considering that part of this updating process is automatized through web services, and automatic detection of information in existing data sources such as ICES, IUCN. STECF agrees this process is realistic and appropriate.

Hence, regarding the indicators for fishing pressure, the IT tool developed to produce a sustainability score is functioning and will now be further operationalised on a separate platform and rolled out for external users.

STECF notes that a remaining issue is the organisation and management of this process in the longer term, especially in the light of new sources of data (national stock assessments for example) that may become available. STECF notes that, with potentially more stock assessments becoming available, the sustainability scoring system may become a more accurate system, as intended and with more Fishery and Aquaculture Products (FAPs) moving from system 1 to system 2 scoring<sup>2</sup>. Any (new) data becoming available should be assessed by the appropriate RFMO, with STECF requested to endorse these data.

Regarding the indicator for sensitive species, STECF notes that EWG 23-18 proposes an alternative wording for this indicator: "potential risk of negative interactions between a fishery targeting a certain species with a certain gear type and a group of sensitive species". EWG 23-18 developed a detailed classification (32 fishing gears, instead of the original suggested 12 gears) to adequately represent the diversity of bycatch risks.

The selection of the number of fishing gears has been based on the scope and objective of each specific indicator. For example, the primary need of the indicator on sensitive species is to distinguish demersal from pelagic fishing gears, as the risk of interaction with sensitive species is highly affected by the fishing gear behaviour. The mandatory information the producers must provide relates to broader fishing gear categories (i.e., seven categories). Table 5.1.1 shows the list of gear categories from the CMO mandatory information (7 gears, first row) is compared with the proposed gear division by the EWG 23-18 to be used for the scoring the indicator on sensitive species (32 gears, second row).

Table 5.1.1 List of gear categories from the CMO mandatory information (7 gears) and the proposed gear categories by the EWG 23-18 to be used for the scoring the indicator on sensitive species (32 gears)

Mandatory CMO information on the category of fishing gear from Annex III - Regulation (EU) No	Seines	Trawls	Gillnets and similar nets	Surrounding nets and lift nets	Hooks and lines	Dredges	Pots and traps	<i>Not included</i>

<sup>2</sup> The scoring of system 1 is based on general available information, the scoring of system 2 is based on the provision of additional information allowing for a more precise sustainability assessment.



1379/2013								
List of gears suggested by EWG 23-18 for scoring the bycatch risk of sensitive species mostly based on Annex XI - Regulation (EU) No 404/2011	Beach seines, Danish seines, Scottish seines, Pair seines	Beam trawls, Bottom otter trawls, Bottom pair trawls, Midwater otter trawls, Pelagic pair trawls, Otter twin trawls	Set (anchored) gillnets, Driftnets, Encircling gillnets, Trammel nets, Combined trammel and gillnets	Purse seines, Lampara nets, Boat operated lift nets, Shore-operated stationary lift nets	Hand lines and pole lines (hand operated), Hand lines and pole lines (mechanised), Set longlines, Longlines (drifting), Troll lines	Boat dredges, Hand dredges used on board a vessel, Mechanised dredges including suction dredges	Pots (traps)	Hand implements: wrenching gear, Clamps, Tongs, Rakes, Spears, Dredges, Seine nets, Midwater trawls

STECF notes that, based on the new method for defining the sensitive species indicator, this is a realistic definition and methodology that can be further developed. However, STECF notes that there are challenges in accessing and processing diverse sources of information, including grey literature and data in various languages. For example, data consistency poses challenges as scientific literature may exhibit a bias towards reporting high bycatch risks. This does limit a comprehensive assessment of this scoring system at this stage.

In addition, as indicated by the EWG, adding additional species to the indicator, (e.g., elasmobranchs), would make it more complex to operationalise compared to restricting mammals, seabirds and turtles covered currently. Several elasmobranch species are also commercial species. In addition, different species have different degrees of protection in different areas, including under national rules that cannot be reviewed with certainty and updated periodically.

STECF notes that the proposed scoring system for the sensitive species indicator in principle is feasible, but acknowledges that some issues remain, such as dealing with different sources of data, inclusion of other species such as elasmobranchs in the indicator and data consistency. STECF proposes for 2025 an additional *ad hoc* contract and an EWG. The *ad hoc* contract to be based on the work done by EWG 23-18 and provide a second iteration of the scoring system. The EWG would assess the work of the *ad hoc* contract and, in addition, consider further development of the indicator and the wider integration of the fisheries sustainability indicators into a single sustainability score.

With the three sustainability indicators being made operational (i.e., stock status and the impact on the seabed which are operational and the indicator for sensitive species in development), the question now arises how to integrate these three indicators into a single FAP score. Reiterating STECF's PLEN 23-01 observations, STECF notes that the way to compute a single sustainability score, combining the three into a single score, is still to be agreed upon. The challenge will be to interpret the actual score for a single seafood product, e.g. (i) if it scores green for one criterion, orange for a second and red of a third then what should the final score be? And (ii) if the scores were red for the first criterion, green for the second and orange for the third, would that result in a different final score (i.e. are the separate criterion weighted)?

STECF observes that the alignment of different scores is not only relevant between different fish products from capture fisheries but a sustainability score of a wild caught fish should in principle also be comparable to a sustainability score of fish products from aquaculture.

On these wider considerations beyond the scope of EWG 23-18, STECF is aware that different initiatives already exist or are in experimentation in the market in which multiple criteria are reflected on the product, including a final overall sustainability score. For example, STECF is aware of current developments under the Product Environmental Footprint (PEF) initiative based on life cycle assessment (LCA). STECF notes thus that there are several ways by which scoring sustainability could be achieved, and operationalising this will, in the current system, require some additional dedicated work to reach a robust consensus.

STECF understands that these longer-term initiatives and views, also from the European Commission, aim to have a scoring system that will allow direct comparison with other products in the wider market of animal proteins.

## **STECF Conclusions**

STECF concludes that the EWG has adequately tested the pilot tool that operationalises the indicators as developed by EWG 22-12 to score a given fisheries product in relation to the sustainability of the targeted stock/species. The pilot tool can be considered operational.

STECF concludes that the methodology proposed by the EWG for an indicator on the impact on sensitive species and its scoring has proven to be feasible. However, including additional sensitive species into this indicator, such as threatened elasmobranchs, may add a substantial degree of complexity and delay the implementation of the proposed scoring.

STECF concludes that an *ad hoc* and an EWG to progress development of operationalising the sensitivity indicator are required. The EWG is requested to evaluate the update of the system and check on the robustness of the system in terms of delivering a sustainability score relating to the sensitive species indicator.

STECF reiterates the conclusion of PLEN 23-01 that this EWG should also discuss the next steps in the process of operationalising and expanding the set of indicators, considering the options proposed by EWG 20-05 and other wider societal developments of sustainability indicators on consumer products. This includes the wider integration of the fisheries sustainability indicators into a single sustainability score.

## **5.2 EWG 23-15 Implementation of the Technical Measures Regulation**

### **Request to STECF**

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

### **STECF comments**

EWG 23-15 met at the JRC in Ispra, Italy, 22-26 January 2024. The meeting was attended by 23 experts in total, including 4 STECF members and 2 JRC experts. As this was a scoping meeting, 15 observers from diverse backgrounds including Advisory Councils, also attended the meeting. STECF considers that the EWG adequately addressed the TORs and has the following specific comments on the ToRs addressed by EWG 23-15.

*ToR 1 – Provide a summary of the current knowledge on the tools available to assess the socio-economic implications of changes in technical measures. This review should provide context and support for the analysis to ensure meaningful conclusions can be drawn from the findings of the models identified in EWG 23-15.*

STECF observes that the EWG provided an extensive overview of bio-economic models, that are valuable tools for evaluating the socio-economic impacts of technical measures, along with a list of their applications in the North Sea, Western waters and Mediterranean Sea regions. On the other hand, for some sea regions (Black Sea and Cyprus waters), no bio-economic model was found applicable.

STECF notes the importance of integrating the modelling part of the impact assessment of the implementation of technical measures within a broader framework where the identification of the policy objectives and a clear feedback loop with the fishers through stakeholder involvement are needed to obtain a robust, realistic and meaningful decision support tool within the current advice process.

STECF notes that the EWG provided general insights on the short- (additional costs) vs. long-term (uncertain predicted long-term gains) economic consequences of the reduction of unwanted catches due to the implementation of technical measures. To capture those short- vs long term trade-offs, it is important to have explicit fisher behaviour dynamics included in the models and appropriate scenarios developed with stakeholders.

STECF notes that the available knowledge on potential socio-economic impacts of improvements in selectivity is often based on studies related to the implementation of the landing obligation (LO), as the main objective of the LO is the reduction of unwanted catches by improvements in selectivity. However, the LO exemption measures that are in force complicate the ability to have meaningful socio-economic assessment outcomes.

*ToR 2 – Identify, quality control, and summarise the data required to run a bio-economic assessment of gear changes. In particular, but not limited to, the species and fisheries identified in EWG 22-19, for which the highest gains can be achieved (outcomes of EWG 22-19), and species (target & bycatch) caught as part of these mixed fisheries.*

STECF notes that the gear selectivity studies, the stock assessment data, the fleet data (catch, effort and economic data) and the social data are the data sources required to feed into the bio-economic models.

STECF notes that while much has been achieved in terms of availability and quality control and merging of gear selectivity studies, single species stock assessment data and fleet data (catch, effort and economic), there is still a gap in the provision and collection of

social data. Therefore, the EWG identified the inclusion of social data in the impact assessment as a priority for sustainable fisheries management.

STECF notes that the EWG provided a thorough comparability analysis of the landings, effort and value metrics for the years 2017-2021, available in the fisheries dependent information (FDI) data set and annual economic report (AER) data set. Overall, improvements in consistency were observed over the years but the persistent discrepancies attributed to the different timing of the data calls, confidentiality issues, involvement of different institutions and inconsistent definitions, highlight the need for pursuing increased national coordination and EU-level workshops. STECF notes that this analysis only covers fleet data at European level and does not cover the Mediterranean.

*ToR 3 – Identify the most suitable models, per ecoregion, to assess where possible:*

- a) the impacts of increasing the size-selectivity of gears on the species caught in mixed fisheries in terms of catch, effort, fishing mortality and recruitment.*
- b) the likely costs and potential benefits associated with gear changes for fleets on the short-term and longer-term.*

*Suitability will be assessed on data requirements, ease of parametrisation, short and long-term forecasting capabilities, adaptability for long-term goals.*

STECF observes that the EWG provided a summary of the bio-economic models in the North Sea, the Celtic Sea, the Bay of Biscay and Atlantic Iberian Waters and the Mediterranean Sea region, that are currently applied for advice of fishing opportunities purposes and are adaptable to assess the impact of technical measures.

STECF notes that within each region, different challenges and varying degrees of model documentation were identified. The models applicable in the Bay of Biscay and Atlantic Iberian Waters and the North Sea region represent the largest coverage of species and fleets.

STECF observes that the EWG identified a multidisciplinary stepwise process to realise a bio-economic assessment of the potential impacts of technical measures. This process was further specified using Atlantic northern hake stock as an example. This hake stock was selected as a case study based on the findings of EWG 22-19, where it was identified as a stock likely to benefit from the implementation of specified gear measures, which may result in increased protection of juveniles, but which is also a potential choke species in many fisheries.

*ToR 4 – Identify meaningful management scenarios that could be produced with these models, and the additional information/data/models that would be required to produce additional scenarios.*

STECF observes that the EWG addressed this ToR by a dedicated discussion with stakeholders and through documents provided by advisory councils (ACs) to gather information on what their perspective is on sustainable management scenarios. STECF notes this resulted in a very comprehensive and valuable overview of the issues identified by stakeholders regarding the implementation of technical measures.

STECF notes that up until now, the role of economic and social aspects has played in fisheries management is unclear and management decisions are mainly based on biological targets. There is a general understanding that the inclusion of social data is essential to reflect decision-making and well-being of the fishing communities. Additionally, STECF observes that the harmonisation of management measures with third countries is important and that a management strategy evaluation approach should be applied to provide a better understanding of variability and uncertainty.

*ToR 5 – Discuss direction of future work, additional needs, stakeholder engagement, and advice needs.*

STECF notes that the EWG identified possible candidate bio-economic models, data sources and frameworks which are needed for the development of a relevant and meaningful tool for evaluating the impacts of technical measures but there is currently no long-term commitment and interdisciplinary cooperation to support this. Assigning the roles and responsibilities, defining the deliverables and establishing the timelines for the way forward, will be discussed in detail at the next STECF Plenary.

STECF notes the need to continue the work on selectivity indicators, which will deliver metrics to measure progress in terms of improving fishing patterns.

### **STECF conclusions**

STECF endorses the outcomes of EWG 23-15 presented during STECF PLEN 24-01 and concludes that all ToRs were appropriately addressed.

STECF acknowledges that, the EWG, through the scoping meeting, has summarised the current knowledge on bio-economic models and their data needs, applicable within the North Sea, Western Waters and Mediterranean advice framework.

STECF concludes that the biggest need and challenge towards a relevant and realistic advice on the bio-economic impacts of technical measures implementation is the integration of bio-economic modelling results in the socio-economic context, including stakeholder perspectives. The addition of this human dimension is the main driver for the actual decision-making process.

STECF concludes that although data, tools, and expertise required to conduct a bio-economic assessment of the impacts of technical measures are available in diverse sea regions, there is currently no suitable financial framework, nor expert working group dedicated to support and coordinate this data-demanding, multidisciplinary process.

STECF acknowledges that a time-consuming stepwise procedure, in which the definition of relevant scenarios with stakeholders, economic conditioning of fleets and cross-checking the model outcomes with stakeholders are fundamental, is needed to fully operationalise a bio-economic assessment. However, as this is a work in progress, intermediate outputs can be delivered in the development of a relevant and meaningful impact advice tool over time. Moreover, in many cases there is no need to commence from the beginning as the first steps in this process were already initialised.

STECF concludes that the next step forward should be to commence a case study (e.g. the FLBEIA WGMIXFISH model for the Atlantic northern hake stock, within the Bay of Biscay) to follow through the stepwise procedure. This would benefit from a collaborative approach between STECF and ICES. The organisation of "who, what, when" will be discussed at the next STECF Plenary.

## **5.3 EWG 24-01 Fishing effort regime for demersal fisheries in West Med - evaluations of closure areas and advancement on the models**

### **Request to STECF**

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

Specifically, STECF should evaluate the conclusions of the EWG in respect to the proposed way forward for a unified model and ways to address some of the identified limitations in the current models. STECF should advise, in particular in respect to TOR 4 of the EWG, on the suitability of the proposed model and its additional developments for the required analysis and on the feasibility of the emerging roadmap for the application of a unified model for EMU 1 & 2.

### **STECF comments**

EWG 24-01 met online from 4<sup>th</sup> to 8<sup>th</sup> March. Given this was a week before PLEN 24-01, a final report was not available to STECF. However, the two chairs of the group presented the main findings of the EWG to the STECF Committee at PLEN 24-01. An executive summary of the report was also made available. STECF comments and conclusions are based on this presentation and the executive summary.

STECF notes that the EWG 24-01 had four different ToRs:

TOR 1. Evaluate the potential of moving towards an MSE process and implementing the bio-economic models within a MSE simulation framework, the assumptions across the four models behind the stock-recruitment (SR) relationships and the standardization of such assumptions. The assumptions discussed by the EWG were:

1. The assumptions across the four models behind the stock-recruitment (SR) relationships and the standardization of such assumptions
2. The models' ability to account for uncertainty around the SR relationships and the sensitivity to implement alternative SR relationships in the assessment process
3. The models' ability to project effort and CPUEs increase as stocks recover.
4. The models' ability to account for provision of Art 4 – EU 2019/1022.

TOR 2. Discuss comparability of model results, harmonizing socio-economic indicators towards the streamlining of the four modelling frameworks into a unified one

TOR 3. Improvements in socioeconomic indicators.

TOR 4. Evaluating the ability of the models used now to predict management variations as stock state improves.

TOR 4A. A feasibility assessment to implements TORs 1-3 till July 2024.

STECF notes that EWG 24-01 addressed all the TORs.

### **Comments on TOR 1**

STECF notes that the EWG reviewed the definition of Management Strategy Evaluations (MSE) in the scientific literature and as reported in ICES guidelines. These are the only guidelines available for European waters. The EWG concluded that the implementation of an MSE process was not necessary to address the four points specified in this TOR 1 and that while testing the uncertainty around SR relationships can be done in a MSE regarding sampling uncertainty (unbiased), this is easier to do outside a MSE framework.

STECF notes that the EWG identified the MSE framework as a useful development to facilitate work on potential future questions on data utility as well as quality and evaluating the effect of uncertainties in the assessment process.

STECF notes that those points were further discussed within each modelling framework used for previous evaluations of the West Med MAP and are presented in Table 5.3.1. This table presents the options that each model has on implementing different “shapes” of the stock recruitment relationship (SR); how uncertainty around this SR is modelled by each model; if the models vary effort limits with biomass changes; and finally if the model has the ability to account for provision of Art 4 – EU 2019/1022 (i.e., implementation of Fmsy ranges)

Table 5.3.1: Individual model ability to cope with the elements requested under the TOR 1 of the EWG 24-01

	IAM	BEMTOOL	ISIS-Fish	SMART
Stock Recruit	5 shapes	6 shapes	5 shapes	Neural network
Stock Recruit Uncertainty	stochastic resampling	Associated error	Stochastic resampling	Stochastic resampling
Effort increase as biomass increases	No effort increase when Fmsy is considered as a target			Spatial CPUE is not updated
Fmsy ranges	Yes			

STECF notes that in addition to Table 5.3.1, the EWG further discussed the additional developments required for each model and the associated timeframe necessary, to complete the technical developments of the model to cope with the inclusion of minimum wages, revenues from non-modelled species, price dynamics and to perform a MSE analysis (Table 5.3.2).

Table 5.3.2: Individual model development and associated timeframes.

Model	Developments	Timeframe
IAM	Inclusion of information on minimum wage rates by country.	October 2024
	Disaggregation of the current French and Spanish fleet at GSA level (instead of only EMU1 level). This will then be more homogeneous with the BEMTOOL application in EMU2.	1-2-years
	Improving the estimates of the share of revenue from non-modelled species.	1-2-years
	Adding variations in market prices to avoid having constant prices.	1-2-years
	Investigate whether it would be relevant to apply the same methodology as in BEMTOOL to have estimates of variable costs per metier.	1-2-years
BEMTOOL	Implementation of relationships between the landing (respectively revenues) of the target species and the	1-1.5 years

	<p>landing (respectively revenues) of all the species differently from the linear one; these relationships could be parameterized after an exploration of the available data to be differentiated by fleet segment.</p> <p>The implementation of a spatial BEMTOOL component is planned under the SEAwis project and is in progress. The component will allow to spatially re-allocate the effort according to the fisher behavioural sub-model associated to each fleet and the availability of the stock.</p> <p>An MSE loop framework, understood as the connection between an operating model (BEMTOOL) and assessment models is under development for other case studies using BEMTOOL (e.g. Adriatic and Western Ionian Seas). The technical aspects should be completed by the end of 2025.</p>	<p>1-1.5 years</p> <p>1-1.5 years</p>
ISIS-Fish	<p>Adding species and finalising the socio-economic module rather than extending the spatial coverage of the model. A limitation is availability of spatial data for the fleets at low resolution (harbor, month level) and even more difficult for species, which spatial distribution is only roughly known.</p> <p>A rigorous evaluation of model quality, strength and weaknesses.</p> <p>An MSE loop framework, understood as the connection between an operating model (here ISIS-Fish) and assessment models is under development for other case studies using ISIS-Fish.</p> <p>The scientific aspects regarding how to model surveys, tuning fleet etc will need to be resolved species by species.</p> <p>Define the uncertainties that can be explored with the framework.</p>	<p>3-4 years</p> <p>3-4 years</p> <p>3-4 years</p> <p>3-4 years</p>
SMART	<p>Completion of the economic module.</p> <p>Integration of other gears next to trawlers.</p> <p>Adaptation of the spatial CPUE or LPUE.</p>	<p>6 months</p> <p>6 months</p> <p>Long term</p>

## Comments on TOR 2

STECF notes that regarding TOR 2, the EWG discussed four options:

1. Unique modelling framework (integrating parts of the existing ones or applying an alternative framework).
2. Choose and extend one model among IAM, ISIS-Fish, BEMTOOL and SMART.
3. Extend all models to both EMUs.



4. Develop an analysis to integrate the outputs of the current 4 modelling frameworks.

For each option, the group discussed the corresponding advantages and disadvantages as summarised in Table 5.3.3.

Table 5.3.3. Advantages and disadvantages of the different options to harmonize socio-economic indicators towards the streamlining of the four modelling frameworks into a single unified model.

	<b>Current format: 2 models in EMU1 and 2 models in EMU2</b>	<b>Extending the 4 models to EMU 1 and 2</b>	<b>One unified model</b>
"Display" of results	4 set of results that are not comparable between EMU 1 and 2 (and only partially between models). More difficult for managers to see a clear picture	4 set of results regarding the same indicators, useful for comparison (but still not complete comparison possible, as some models will run some scenarios and other not, and might have different assumptions)	Only one set of results, easier for managers
Scenarios	Only some scenarios can be run by the different model (not all scenario by one model)	Possibility to compare results of the scenarios between EMU 1 and 2. However, some scenarios will be run by some models and other by other models, so it will not be possible to compare the results of all scenarios	All scenarios can be run in one framework and comparisons between EMU can be possible
Robustness of results	Comparison among different modelling framework is possible, pairwise (in EMU1 between IAM and Isis-Fish; in EMU2 between BEMTOOL and SMART)	Comparison among different modelling framework is possible comparing all 4 models in the 2 EMUs.	Choice of only one assumption instead of assessing the robustness of several assumptions. No comparison among different modelling framework is possible.
Mean and resource	Doable, as it is what is currently done	Demanding for all modellers. Time consuming. Need extensive communication between modellers	Need a project to work on a "new" modelling framework. Time consuming. Need extensive communication

	<b>Current format: 2 models in EMU1 and 2 models in EMU2</b>	<b>Extending the 4 models to EMU 1 and 2</b>	<b>One unified model</b>
			between modellers and need a "lead" modeller who will work extensively on the new modelling framework.
Flexibility	Different scenarios and/or TORs can be investigated	Different scenarios and/or TORs can be investigated	Loss of flexibility to address new TORs, this will depend on what the "new" modelling framework will be able to do (which would not be as much as the 4 different models).
Developments in the future	Developments of different modules, as explained by model in the "additional developments" subsections in section 2.	"Personalised" developments per model would not be possible in the short term, as time would be needed to extend each model to the other EMU, and there will also be a trade-off between the time needed for communication between experts of each EMU and the "personalised" development of each model.	Only a "new" modelling framework would be developed, and the possible development in this framework will depend on the involvement of each expert, which may be limited as most of the time available would be spent on designing a common framework (and very dependent on a "lead" modeller).

STECF notes that according to the EWG, the fourth option (to integrate the outputs of the four current modelling frameworks) would have similar trade-offs to the extension of the models to both EMUs. However, the timeframe necessary for its implementation is much shorter in that it could be delivered by October 2024. STECF notes that this option would require three extra tasks to first clarify the data and scenarios (June), perform preliminary runs (September) and summarise results of the final runs (end of October). The final runs would be evaluated during the STECF EWG planned for October.

STECF notes that the other streamlining options (option 1 to 3) would take a minimum of 1 to 4 years depending on the model.

STECF notes that building a new unified model, specifically if built on a new platform, runs the risk of losing some of the knowledge acquired during the evaluation process used to date for the West Med MAP. It also poses the risk of losing, at least partially, the participation of experts with experience in bio-economic modelling in this area.

STECF further notes that having a model that is fit for purpose is not a guarantee of having the necessary, data knowledge, time and engagement in the process. In this regard, STECF

recalls the conclusion from TOR 5.2 of this report, where STECF highlights that the existence of a model that is fit for purpose helps but is not a guarantee of a robust assessment procedure and meaningful results.

### **Comments on TOR 3**

STECF notes that according to the EWG, some price variations can be included in the models. It also notes DG Mare proposed an ad hoc contract to collect information on subsidies provided for the fishing sector in the three Member States (i.e., France, Italy and Spain), including payments following the crisis mechanism following from the conflict in Ukraine. In this regard, the EWG proposed the following TORs for this ad hoc contract:

- TOR 1: Provide an overview on the implementation of the crisis mechanism in the respective Member State. This should include the legal framework.
- TOR 2: Develop and populate a database with the available data on paid subsidies in the MS regarding the fleet segments used in the bio-economic models of the West Med Map evaluations (economic fleet segments, specific fleet segments in Italy).
- TOR 3: Provide an overview on the measures of temporal and permanent cessations in the MS. This should include an overview on payments already issued and planned funding in the future.
- TOR 4: Analyse AER data regarding operational subsidies for the time period 2012-2022 in France, Italy and Spain. This information should reveal how the last years may have been different from the years before the COVID-19 crisis. This provided data overview should be specified by countries and fleet segments.

STECF notes that these TOR should be further discussed by the STECF bureau with DGMARE before issuing the ad hoc contract.

STECF notes that harmonising the social indicators across models (excluding the SMART model), will produce indicators on GVA, FTE, engaged crew and average salaries in time for the October 2024 meeting. The three models will also include the minimum wage component.

Regarding TOR 4, STECFs note that variations of effort limits cannot be simulated when the target is F-based. Variations of maximum catch limits and socio-economic indicators in response to stock increase are already implemented in all models.

### **STECF conclusions**

STECF concludes that all the models can account for provision of Art 4 of Regulation (EU) 2019/1022. However, none of the models will be capable of changing the effort limits set out in Article 4 when the target is F-based for the EWG scheduled for October 2024. This would require a feedback loop where a change in the selectivity due to different species shared across fleets recalculate the F target. This limitation is likely to have a further impact in the long-term than for short-term projections.

STECF concludes that the options to expand all the models to all the EMUs or to develop a new model in a different platform will require from 1 to 4 years to complete and will not be implemented in time for the next EWG in October.

STECF concludes that the development of a new unique model, possibly incorporating a MSE module would require a longer-term perspective, anticipating future advice requests that could differ from the current ones.

STECF concludes that developing a new model runs the risk of lessening the engagement of experts and loss of knowledge obtained in previous EWGs evaluating the West Med MAP, without any guarantee of a successful and complete bioeconomic assessment of the plan.

STECF concludes that the option to integrate the outputs of the four current modelling frameworks, is the only option that could be completed for the October EWG meeting. However, given the existing time/financial constraints STECF cannot anticipate the best way of addressing this. In this regard, STECF concludes that the two EWG chairs should soon organise a meeting with the modellers to further discuss the way forward.

STECF concludes that the October EWG should have enough time to integrate the outputs of the models, which will require the scenarios to be defined and run prior to the meeting. This integration should provide a clear picture of likely trends compared to the base case situation irrespective of the model used. If a contradiction appears in the outputs (trends) of different modelling platforms, an explanation of why can be obtained.

STECF concludes that the EWG report includes two tables regarding details of future scenarios which could be filled by DGMARE when providing the scenarios as these will be a good guideline on the level of detail necessary to parameterize the models.

STECF concludes that it would be helpful if the scenarios should be less complex as in previous years as this will make it easier to draw conclusions on which of the management measures have had an influence on the status of the stocks, for example.

STECF concludes that an analysis of the subsidies received by the fleets could help in assessing the financial situation of the fishing firms. Further, STECF concludes that this analysis should include which subsidies are currently included in the different datasets (e.g., operational subsidies such as fuel tax exemptions) and how some of these subsidies, for which detailed information will be provided by the ad hoc contract, could be incorporated in the results obtained from the model(s).

STECF concludes that the inclusion of subsidies in the projection of the economic indicators does not offer a genuine economic situation but only insight into their financial performance. This is because the models do not provide information at an individual company level (economic status) but only at fleet segment level.

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

### **6.1 Assessment of a Joint Recommendation for amending the Technical Measures Regulation regarding the “sprat box”**

#### **Background provided by the Commission**

This joint recommendation submitted by the Scheveningen Group concerns the technical measures for sprat fisheries in an area along the Danish North Sea coast called “the sprat box”. Part C, point 4, of Annex V to Regulation (EU) No 2019/1241 of 20 June 2019 provides that fishing with any towed gear with a codend mesh size of less than 32 mm or static nets less than 30 mm mesh size is prohibited in a defined area along the Danish North Sea coast “the sprat box” in the period from 1 July to 31 October. This prohibition was initially introduced in order to protect herring, which is caught as bycatch in the sprat fishery.

Considering that recent scientific data further confirms previous conclusions on bycatch of herring in the sprat fishery and that the suspension of the sprat box has no harmful impact on the ecosystem, including the herring stock, the Scheveningen Group requests that the sprat box provision is repealed from the technical measures set out in Regulation No 2019/1241.

Background documents are published on the meeting’s web site on: <https://stecf.jrc.ec.europa.eu/plen2401>

#### **Request to the STECF**

STECF is requested to review and make any appropriate comments and recommendations on the proposed removal of the sprat box.

In particular, STECF is requested to confirm whether the proposed removal of the sprat box would not affect negatively the bycatch of herring in the sprat fishery and will not have harmful impacts both on the ecosystem and on the herring stock.

#### **Background to request**

The so-called “sprat box” to the East of Denmark defined in Annex V, Part C, point 4 of the Technical Measures Regulation (Regulation (EU) 2019/1241) sets out 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. This area closed from 1 July to 31 October, 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 was based on data that showed more than 90% of age 0 herring caught in ICES 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 coast of Denmark, covering the ICES statistical rectangle defined by 7° E, 55° 30' N, 57° N and the Danish coastline as shown in Figure 6.1.1.

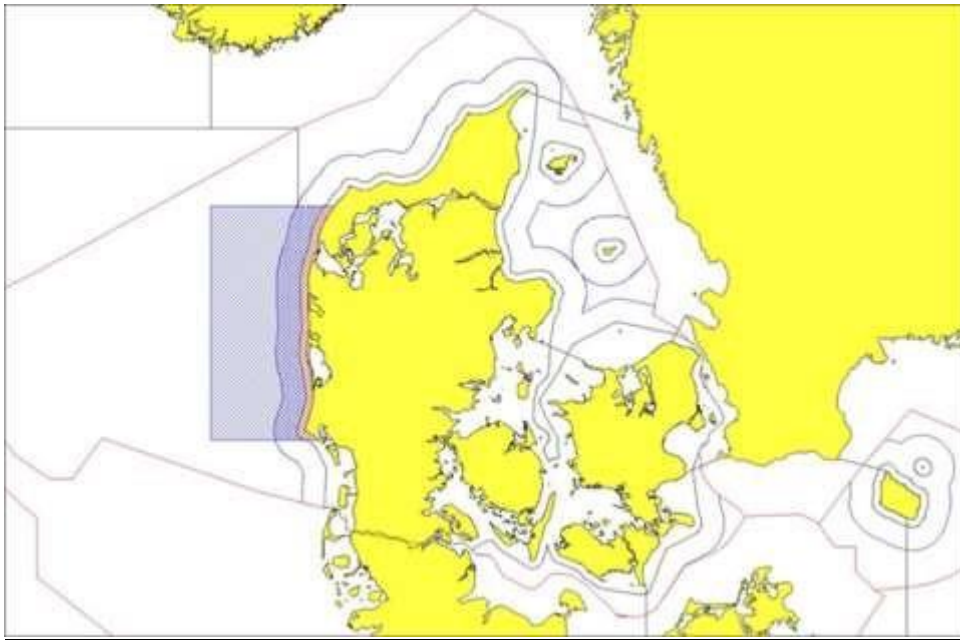


Figure 6.1.1: The Sprat Box area (taken from the Scheveningen Group Joint Recommendation).

Data from 1987 to 1995 showed a very high mortality of immature herring, mainly in the small-meshed fisheries. As a result, until 1996, other than the sprat box, the only control on the bycatch of herring in industrial, small-meshed fisheries was the introduction of a TAC for sprat, which included a 10% bycatch limit of herring applying an individual trip basis. Since the bycatch ceiling was introduced, reported catches and fishing mortality on 0-1 group herring has declined. The annual bycatch ceilings in the small-meshed fishery in 1996, these ceilings have only been fully taken in 2014, 2016, 2020 and 2021 (STECF 20-03; Table 6.1.1).

Table 6.1.1: TACs and catches of North sea Herring for the last years (taken from ICES HAWG REPORT 2023).

Year	2017	2018	2019	2020	2021	2022
TAC HC ('000 t)	482	601	385	385	356	428
"Official" landings HC ('000 t) *	485	594	439	415	356	458
Working Group catch HC ('000 t)	485	594	440	417	356	461
Excess of landings over TAC HC ('000 t)	3	-7	55	32	0	33
Bycatch ceiling ('000 t) **	11	10	13	9	8	8
Reported bycatches ('000 t) ***	7	8	5	10	9	6
Working Group catch North Sea ('000 t)	492	602	446	427	365	467

HC = human consumption fishery

\* Working Group catches may differ from 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. Since 2019 by Denmark and Sweden.

A derogation that suspended the existing "sprat box" was introduced in the pelagic discard plan by Regulation (EU) 2017/1393. The derogation was applicable until 31 December 2020 and was based on an ICES evaluation (ICES 2017) of the effects of lifting the "sprat box". Data from an experimental fishery conducted in the months of July, August, September, and October in 2014 and 2015 was the basis for this evaluation (covering the main season of the commercial fishery for sprat). The results were summarised by ICES HAWG in 2016 (ICES, 2016, Annex 04, Working Document 06) and showed no significant difference in the relative amount (in numbers) of herring vs. sprat in catches inside and outside the box. However, the evaluation did show 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 advised 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"*.

Subsequently, under the Commission Delegated Regulation (EU) 2017/1393 the sprat box was opened by way of derogation from paragraph 3 of Article 21 of Regulation (EC) No 850/98 until the end of 2020. Commission Delegated Regulation (EU) 2021/1160 of 12 May 2021 amending Regulation (EU) 2019/1241 extended the derogation contained in Delegated Regulation (EU) 2017/1393 from the prohibition, until 31st of December 2023.

### Previous STECF evaluations

There have been several evaluations of the "sprat box" as follows:

- An evaluation carried out by Baron (2002). This was an internal, unpublished review of the sprat box.
- A further review was carried out by STECF SGMOS in 2007
- An additional STECF review of closed areas carried out by PLEN 14-02 included the sprat box.
- An evaluation of a proposal to remove the sprat box as part of a Joint Recommendations submitted by the Scheveningen Group to establish a discard plan in the North Sea was carried out by STECF EWG 17-03.

More recently STECF PLEN 20-02 evaluated a new Joint Recommendation from the Scheveningen Group concerning technical measures for the conservation of fishery resources of the North Sea. This JR requested the extension of the derogation beyond 2020 for the continued opening of the sprat box. PLEN 20-02 concluded that based on the information available, there was no clear indication that the lifting the Sprat Box since 2017 has caused any damage to the herring stock.

STECF further concluded that based on the years of observations available (two of experimental fishery 2014-2015 and the ordinary fishery in 2020), it was unlikely that lifting the sprat box would lead to lower levels of protection than the other measures (i.e., the TAC ceiling) currently in place. However, given the variability of results between years, and in the absence of catch data in numbers, STECF concluded that it could not be fully discounted that the industrial fishery may result in larger amount of bycatch in numbers of juvenile herring when operating inside the sprat box.

Additionally, PLEN 20-02 concluded that to clarify this issue, further fishery monitoring was needed. STECF suggested that an evaluation of the impact of the opening of the sprat box should be carried out after three years of monitoring. This monitoring should include information on herring bycatch both in weight and in numbers per kg of 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 concluded 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. Therefore, the actual level of effort and by catches within the “sprat box” from other gears versus catches outside should also be reported.

Finally, PLEN 20-02 concluded that based on the data and information available, STECF was unable to assess whether any detectable, direct, detrimental impacts on the marine ecosystem are likely to arise if the sprat box regulation is repealed.

### **Summary of the information provided to STECF**

STECF was provided with a new Joint Recommendation of the Scheveningen Group concerning technical measures for the conservation of fishery resources of the North Sea (26.02.2024) which sought the permanent removal of the sprat box.

#### Joint Recommendation

The JR concerns the permanent removal of the “sprat box” according to the provisions set out in art 15.2 of Regulation (EU) N°2019/1241, the Scheveningen Group requests that the Commission adopts a delegated act to repeal the provision set out in Annex V, Part C, point 4 from Annex V to Regulation (EU) N°2019/1241.

The JR is accompanied by the following six Annexes.

DTU Aqua (2024). Evaluation of the effect of the Sprat-box concerning by-catch of herring in the Danish fishery for sprat (new document)



This is a new assessment carried out by the Danish Institute of Aquatic Resources (DTU Aqua) in response to a request from the Scheveningen Group. It is an evaluation of the effect of the sprat box on bycatch of herring in the Danish sprat fishery. It was as a response to the conclusions of PLEN 20-02 that concluded "*based on the information available, there is no clear indication that the lifting of the Sprat Box since 2017 has caused any damage on the herring stock.*" However, PELN 20-02 also concluded a re-evaluation should be carried out after three years of monitoring. This monitoring should include information on herring bycatch both in weight and in numbers per kg of sprat and length distribution data from the herring bycatch inside and outside the sprat box. This was to allow verifying that no deterioration of the selectivity on herring juveniles (in numbers) has occurred.

ICES response to EU request to assess the effects of lifting the "sprat box" (ICES Special Request Advice. Greater North Sea Ecoregion, sr.2017.0) (previously submitted)

ICES was requested by the EU to provide 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, (i.e. after how much time can the situation have changed sufficiently again that a re-establishment of the sprat box could reduce unwanted catches).

ICES advises 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. 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> (previously submitted)

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

ICES. 2023. Herring Assessment Working Group for the Area South of 62° N (HAWG). ICES Scientific Reports. 5:23. 837 pp. <https://doi.org/10.17895/ices.pub.22182034> (new document)

This Annex is the report of the ICES herring assessment working group for the area south of 62° n (HAWG) and includes the assessments of the North Sea herring and sprat in 2023.

Danish sampling plan for industrial fisheries (previously submitted)

This Annex details a sampling plan from the Danish Fisheries Agency's for the weighing of fisheries products landed in unsorted industrial catches. It was previously evaluated by 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 bycatch by species and area.

COM approval of sampling and control plans 8.05.2020 C 2020 2944 DA ACTE f (previously submitted)

This Annex is the 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. (in Danish) (previously submitted).

### **STECF observations**

STECF observes that the “sprat box” was established to reduce bycatch of juvenile herring in the sprat fishery along the west coast of Denmark in the North Sea. Its effect has been evaluated on numerous occasions both by ICES and STECF. None of these evaluations have shown definitively it to be effective in achieving this objective.

STECF observes that after the ICES evaluation of the potential effects of lifting of the “sprat box”, since 2017, two 3-year derogation from the restrictions have been granted by DGMARE. A derogation that suspended the existing “sprat box” was last introduced by Delegated Regulation (EU) 2021/1160, amending Regulation (EU) 2019/1241. This exemption was applicable until 31 December 2023. The derogation covers:

- Towed gears with mesh size less than 32 mm
- Purse seines
- Gillnets, entangling nets, trammel nets and driftnets with mesh size less than 30mm.

STECF acknowledges that to address the concerns expressed by PLEN 20-02 regarding catches inside and outside the box, the Danish Institute of Aquatic Resources, DTU Aqua (2024), has made available a new set of catch information covering the period 2013 to 2023. The new data set includes information on herring bycatch (in terms of weight and length), both inside and outside of the sprat box, the length composition of herring bycatch as well as the landings information of different gears used by the Danish fleet in herring and sprat fishery inside and outside the Sprat box. The analysis updates the previous analysis presented in 2020 over the full time series.

STECF observes that the experimental fishery conducted in 2013-2015 to evaluate the effect of the Sprat-box defined requirements for vessels to access the closed sprat box and established methods for self-sampling. The self-sampling has continued voluntarily after the suspension of the sprat box in 2017. However, there are no agreed criteria agreed on which vessels could participate in the sampling or on the level of sampling actually achieved.

STECF observes that the spatial distribution of samples obtained during the experimental fishery follows the spatial distribution of commercial sprat catches quite well (Table 6.1.2). However, sampling coverage inside and outside of the Sprat Box seem to be somewhat unbalanced. There was a higher proportion of catches sampled within the Sprat-box at the beginning of the time series but since 2016, samples from inside the Sprat-box are practically missing up until 2020 (Table 6.1.3). A few samples have been provided from inside the sprat box post-2020.

Table 6.1.2. Number of cumulative samples by ICES statistical rectangles for the period 2013-2023. The Sprat-box is defined as the rectangles 42F7, 42F8, 41F7, 41F8, 39F7 and 39F8 (marked in bold).

North-South	West-East								
	F0	F1	F2	F3	F4	F5	F6	F7	F8
42	0	0	0	0	0	1	6	<b>1</b>	<b>2</b>
41	0	0	0	0	0	23	29	<b>33</b>	<b>25</b>
40	0	1	0	0	4	52	51	<b>29</b>	<b>68</b>
39	1	1	0	5	17	42	67	12	28
38	1	0	0	11	34	25	27	5	8
37	0	1	4	14	8	13	6	41	4
36	0	0	0	1	6	7	1	6	1

Table 6.1.3. Number of samples by year, inside and outside the Sprat-box.

	Year										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Inside	4	59	73	0	0	1	0	0	10	2	9
Outside	22	64	115	45	35	61	46	19	42	41	74

STECF further observes that the latest data analysis by DTU Aqua follows the same approach as used for the evaluation of the sprat-box carried out by ICES in 2016 (ICES, 2016).

STECF notes that two aspects of catch composition were analysed (i.e., the weight of herring in the sample relative to the weight of sprat and the number of herring in the sample relative to the weight of sprat). These two parameters were analysed to investigate whether there were significant differences between samples taken inside the sprat box and in an area adjacent to the sprat box. For both number and weight, data were log-transformed and analysed using GLM/Anova and a GLM mixed model.

STECF observes that the two models gave rather similar results. With respect to weight, the analysis did not show a statistically significant effect of the sprat box on the catch weight of herring relative to the catch weight of sprat. The analyses estimate around a 20% lower herring/sprat weight ratio within the sprat box compared to outside the box.

Similarly, STECF notes that the effect of the sprat box on the number of herring per weight unit of sprat was not significant. The number of herring per weight of sprat was estimated to be 23% higher for the area outside the sprat box.

Further, STECF 24-01 observes that the overall length distribution of herring bycatch inside and outside the sprat box is quite similar. The data indicates a lower bycatch of the smallest length groups within the sprat box (Figure 6.1.2.).

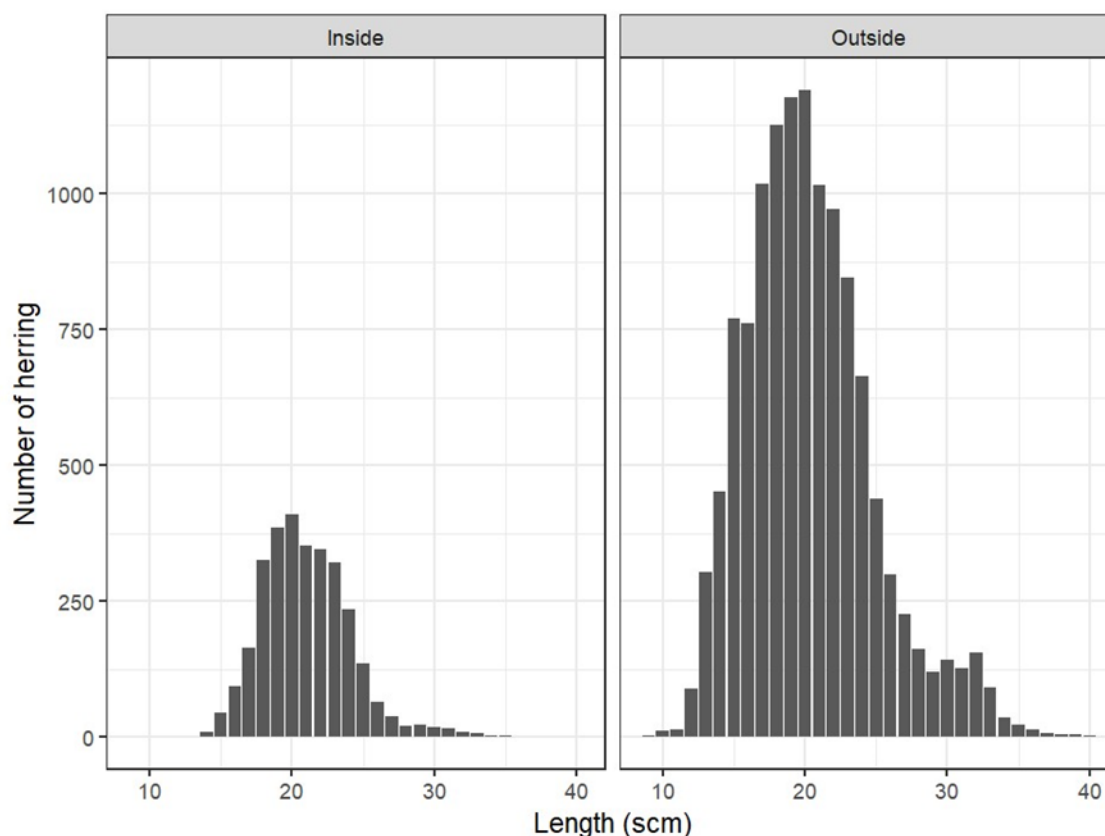


Figure 6.1.2. 2013-2023 Length distribution of bycatch herring inside and outside the Sprat-box.

STECF observes that the lower numbers of herring inside the sprat box is likely due to the lower number of samples (see Table 6.1.3.). The DTU Aqua (2024) report states that 91% of all sampled bycatch herring belonged to 0-year group, noting that no information on mean lengths at age of herring during the sampling period was made available.

STECF observes that length distributions of bycatch herring inside and outside the sprat box, shows a strong year effect (Figure 6.1.3.). There is a tendency, that the smaller herring are found outside the Sprat-box. STECF agrees with the report that very unbalanced sampling may affect that result (e.g., for 2016, 2020, 2021). STECF also notes that the year-class abundance may also have a significant effect on bycatch of herring juveniles in the sprat fishery. For example, abundant year-classes of 2013 and 2014 (ICES 2023), can be clearly detected in the bycatch both inside and outside the Sprat box. The same holds also for 2022 and 2023.

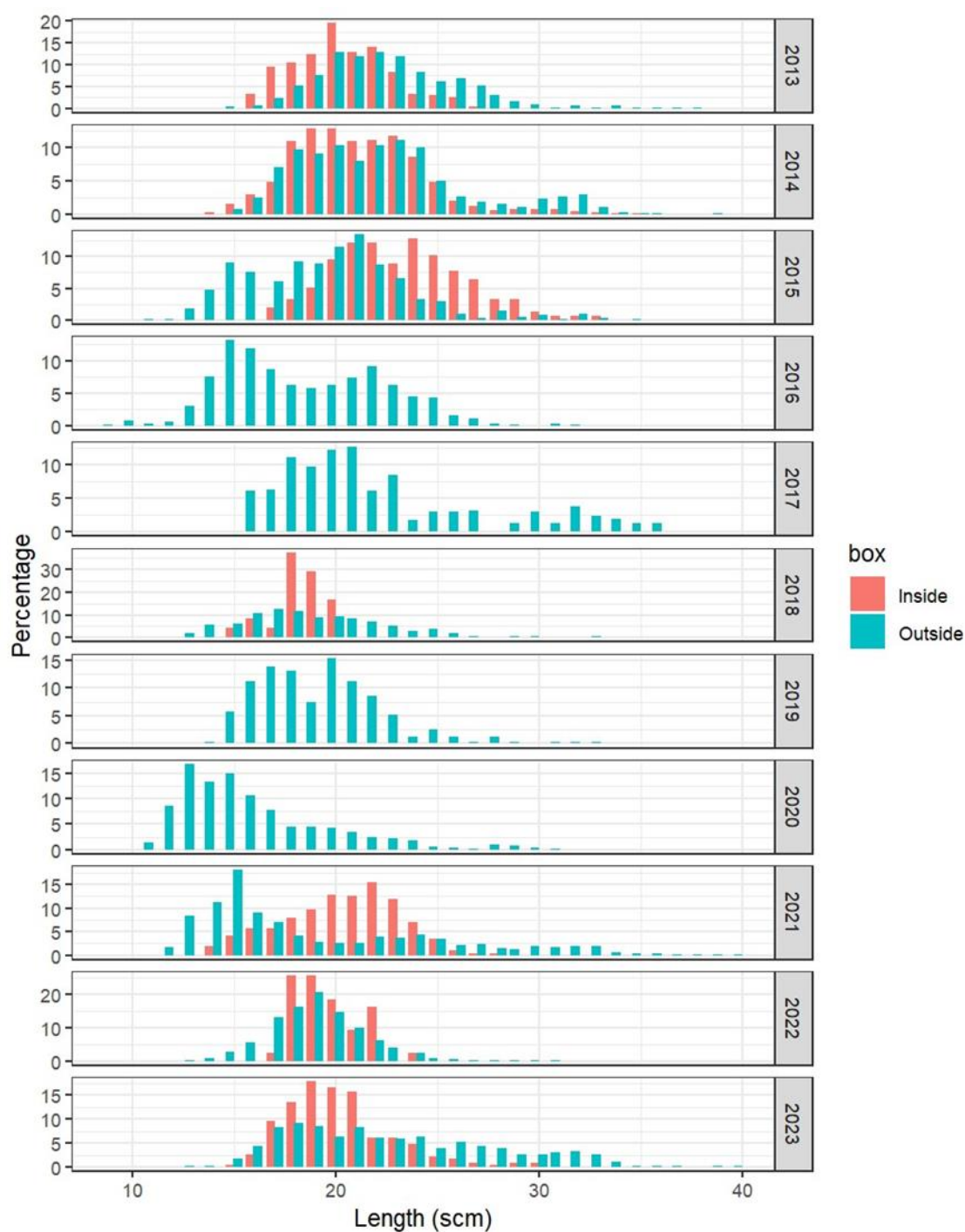


Figure 6.1.3. Length distribution of bycatch herring by year and inside and outside the Sprat-box. The length distributions sum up to 100 % for each combination of year and box.

STECF observes from the provided information, landings from trawls with 16-31 mm mesh size dominate in targeted fishery for sprat. Catches of herring from other fisheries within the sprat box using other towed gears with less than 32 mm mesh size and with fixed gears with less than 30 mm meshes or purse seiners with less than 32 mm have been insignificant over the period 2013-2023.

STECF notes that the experimental fishery of 2014 and 2015 (ICES 2017) showed that herring were caught in similar numbers but with a lower weight inside the box compared to outside, implying that the mean weight of herring caught as a bycatch inside the sprat box would be less than those caught outside. This indicates that the catches inside the box comprise younger fish. However, STECF, notes that the analysis over the full available time series does not necessarily support this and indicate that both weight and number of herring per weight unit of sprat were higher outside the "Sprat Box".

Therefore, STECF notes, that given the high variability of results between years revealed in the analyses, as well as low number of samples from inside the sprat box, it cannot be ruled out that the industrial fishery may occasionally result in higher bycatch in numbers of juvenile herring when operating inside the box than outside. STECF encourages further monitoring of bycatch composition of fleets involved to assess whether this is the case.

#### Potential impacts of removing the Sprat box on herring

STECF observes that several analyses carried out since the setting up of the sprat box have shown that the major driver of the reduction in fishing mortality on juvenile herring observed after 1996 was the introduction of the bycatch ceiling (TAC) for herring for the small meshed fishery (fleet B) in the North Sea (Baron 2002 in STECF 2007, ICES 2017, STECF 20-02), rather than as a direct effect of the sprat box.

STECF notes that based on the most recent estimates of SSB and fishing mortality, ICES classifies the stock of the North Sea herring (herring in in Subarea 4 and divisions 3.a and 7.d), as is being harvested sustainably. Fishing mortality has been below the estimated  $F_{MSY}$  (0.31) since 1996. The SSB in autumn 2022 was estimated at 1.65 million tonnes, which is above  $B_{pa}$  (0.96 million t) and  $MSY B_{trigger}$  (1.23 million t). Since the strong 2013-year class, recruitment of herring has been low, but the latest two years are higher than the 10-year rolling average. The 2021-year class is estimated at 123% and the 2022-year class at 124% of the 10-year geometric mean recruitment (ICES, 2023).

STECF observes the most recent assessments do not give any indication that the temporary reopening of the Sprat box to the pelagic industrial fishery, has resulted in any increase in fishing mortality on juvenile herring, on  $F_{bar}$  and/or recruitment estimates.

STECF notes that the effect of allowing purse seine catches and static gears within the sprat box appears low since the majority of bycatch comes from the targeted sprat fishery using trawls with 16-31 mm mesh size. The catches of herring within the Sprat box by fixed gears with less than 30 mm meshes or purse seiners with less than 32 mm meshes have been insignificant in 2013-2023.

#### Potential impacts on Sprat

STECF notes that the sprat stock in the North Sea has been above  $B_{pa}$  and  $MSY B_{escapement}$  (both 125 000 t), since 2014. After the reopening of the sprat box to the pelagic industrial fishery using 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. The most recent estimates of fishing mortality ( $F_{bar}(1-2)$ ) do not reveal any clear trend.

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
$F_{bar}(1-2)$	1,42	0,66	1,23	2,2	1,42	1,48	1,22	1,88	1,9	1,3

According to this information, there is no indication that lifting the sprat box has caused any deterioration on the sprat stock.

#### Expected Impacts on the ecosystem

STECF is unable to assess whether removing the box will have any detectable or additional detrimental effects on sensitive species and habitats as no information has been provided. However, STECF observes that given the sprat fishery is a pelagic fishery it is highly

unlikely to have any impact on habitats within the box. There is no information provided on bycatch of sensitive species.

### **STECF conclusions**

STECF concludes that based on the latest information available and the various ICES and STECF there is no indication that the removal of the sprat box since 2017 has caused any detectable damage to the North Sea herring stock.

STECF concludes that based on the years of observations available (2013-2023), it is unlikely that opening the sprat box would lead to lower levels of protection of the herring stock than what is currently in place through other management measures, provided these measures are enforced.

STECF concludes that given the high variability of results of experimental fishery between years, revealed in the analyses, as well as low number of samples available from inside of the sprat box, it cannot be fully ruled out that the industrial fishery may occasionally result in higher bycatch in numbers of juvenile herring, when operating inside the box than outside. Therefore, STECF encourages further monitoring of bycatch composition of fleets involved in the sprat fishery.

STECF reiterates the conclusion of PLEN 20-02 that with the data and information available, STECF is unable to assess whether any detectable, direct or detrimental impacts on the marine ecosystem are likely to arise if the sprat box is permanently reopened.

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## 6.2 Assessment of the review and analysis of socio-economic data relating to the TAC of Pollack in 8abde

### Background provided by the Commission

On 12 December 2023, the Council of Ministers for Fisheries reached a political agreement to set a provisional TAC for pollack in ICES divisions 8abde, at the level of 500 tonnes for the period from 1 January to 30 June 2024. This agreement was then part of the Atlantic fishing opportunities regulation for 2024 adopted by the Council on 10 January 2024. It was published in the Official Journal on 11 January 2024.

**Recital 15** of the Atlantic fishing opportunities regulation for 2024 explains:

*"Article 5(3) of the Western Waters MAP provides for the management of mixed fisheries with regards to by-catch stocks taking into account the difficulty of fishing all stocks at MSY at the same time, especially in situations where that leads to a premature closure of the fishery. Mixed fisheries considerations in the Bay of Biscay published on 14 November 2023 indicates that, if horse mackerel is excluded, pollack (*Pollachius pollachius*) is the most limiting stock for demersal fisheries in the Bay of Biscay for three fishing segments out of 21. Given the socio-economic data submitted by one of the Member States concerned, suggesting that for pollack in the Bay of Biscay and Iberian waters (ICES subarea 8 and division 9a), mixed fishery considerations point to the difficulty of fishing all TACs fully, more time is needed in order to assess the socio-economic impact of the setting of fishing opportunities for pollack for fishers active in this mixed fishery (sole (*Solea solea*) and Norway lobster). For that reason, a provisional TAC for pollack in the Bay of Biscay (divisions 8abde) should be set for the first half of the year. On the basis of the ICES advice of 30 June 2023 regarding pollack in the Bay of Biscay and Iberian waters, and taking into account the seasonality of the fishery, the level of that provisional quota should be fixed at 500 tonnes from 1 January 2024 to 30 June 2024. Such a provisional TAC aims to ensure fishing activities can continue while the data is being assessed, until the Council sets a definitive Union TAC."*

In order to clarify the process following the setting of the provisional TAC, the Commission adopted the following **statement on pollack in the Bay of Biscay and in the Iberian waters**: *"Article 5(3) of the Western Waters multiannual plan provides for management of mixed fisheries with regards to by-catch stocks taking into account the difficulty of fishing all stocks at MSY at the same time, especially in situations where that leads to a premature closure of the fishery. Such difficulty should be demonstrated and supported by specific, reliable and verifiable socio-economic data. Where the difficulty to fish all stocks at MSY occurs, the Commission invites the Member States to submit socio-economic data from verifiable sources, in particular obtained through the EU Data Collection Framework. The Commission takes note of the submission made by France stating that the TAC set by the Council for the pollack stock in the Bays of Biscay and Iberian waters would result in the premature closure of mixed fisheries, leading to serious socio-economic consequences. If and when France submits specific, reliable and verifiable socio-economic data to substantiate the choke effect for their fleet segments in the Bay of Biscay, the Commission will assess and consider based on that assessment submitting a proposal for an in-year amendment for 2024 fishing opportunities, to adjust this TAC, as appropriate. The same approach would be considered by the Commission for Spain and Portugal should they provide specific, reliable and verifiable socio-economic data."*

On 19 January 2024, the report *ad-hoc* 2398 was delivered following the Commission's request to review and analyse the socio-economic data relating to pollack in the Bay of Biscay. This report has been produced to inform the current request.

Background documents are published on the meeting's web site on: <https://stecf.jrc.ec.europa.eu/plen2401>

### **Request to the STECF**

The STECF is requested to:

- 1) Review the findings and conclusions of the *ad-hoc* report 2398 of 19 January 2024 to inform policy.
- 2) Indicate what is the level of TAC needed to avoid that the pollack TAC in divisions 8abde would generate a 'choke effect' in the targeted fisheries of sole and Norway lobster for the last 6 months of 2024, taking into account the difficulty of fishing all stocks at MSY at the same time.

### **Summary of the information provided to STECF**

STECF was provided with four supportive documentation sources:

- An *ad hoc* contract report which provides a review and analysis of the socio-economic impacts following the outcome of the Fishing Opportunities for 2024 dated the 19th of January 2024.
- A scientific study submitted by IFREMER France - "Scientific report: Analysis of mixed fisheries in the Bay of Biscay according to several assumptions concerning the setting of the TAC for pollack (POL/8ABDE) and impact on the creation of potential choke-species".
- A second study submitted by France - the SCOPE study (3 documents in the form of PowerPoint presentations) "Presentation of the SCOPE tool", "Presentation of LEMNA" and "Benthic and Demersal Commission of the Bay of Biscay: 2024 Works carried out in the framework of the SCOPE project – Update of socio-economic risk assessments for fishing companies in the Bay of Biscay"
- A note from French authorities summarising the conclusions from the French studies.

#### *Review of the ad hoc contract supportive study*

This study is based on datasets from the Fisheries Dependent Information-FDI- 2023 datasets (STECF, 2023) and the Annual Economic Report on the EU Fishing Fleet-AER-2023 (STECF, 2023b) and further averaged data over the 2020-2022 period. DGMARE also provided the *ad hoc* contractor with information on quota swaps between Spain and France on pollack in previous years.

The study extracted data for pollack catch volume and value and total value for other species per FDI DCF Métier. This was subsequently linked to AER fleet segments, with separate analyses for ICES areas 8abde. Based on this analysis, the study calculated the historical quota uptake at the Member State level per quarter (for the three sub-stocks 8abde, 8c and 9a) and the dependency of total income on the income from Pollack catches per métier (for the sub-stock 8abde).

The study found 162 different métiers presenting pollack landings in the Bay of Biscay (divisions 8abde) from 2020 to 2022. Of these, 53 French métiers have a dependency (total income from the métier) higher than 10%. According to the data, none of the Spanish métiers had a dependency higher than 1% for pollack in divisions 8abde.

The study estimates the historical quota uptake per quarter, in the three management areas of the stock. It shows that, on average, 45% of the pollack TAC for France (1230 tonnes before swap, 1573 tonnes after swaps) was utilised after 6 months (between 500 and 675 tonnes caught). Over the entire year, the pollack TAC tended to be only partially taken (82% on average) in ICES area 8abde. The uptake of the Spanish TAC was less than 3%. Hence, the study suggests that the pollack TAC without swaps has not limited the fisheries in ICES area 8abde during 2020-2022. When quota swaps of more than 200 tonnes of TAC from Spain to France are factored in, the impact is lessened further as shown in Figure 6.2.1 below.

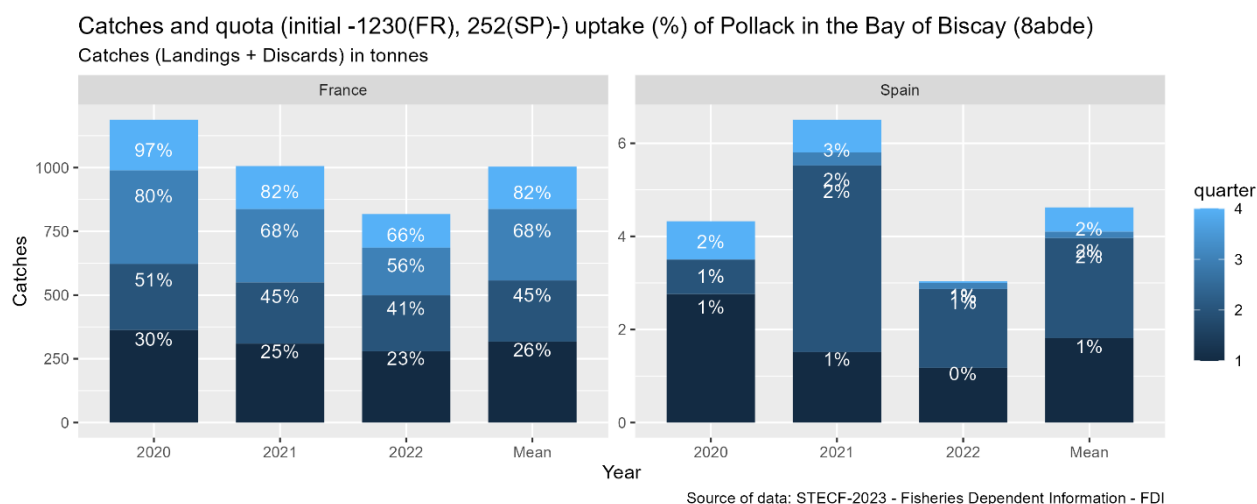


Figure 6.2.1. Pollack TAC utilization during 2020-2022 for the substock of the Bay of Biscay (8abde).

In ICES area 8c where historically the pollack TAC has been much smaller (180 tons), the mean uptake for Spain was estimated to be 92% on average, while France has not used its quota. Thus, the study concludes that the pollack TAC has not limited the fisheries in ICES area 8c during 2020-2022.

In ICES areas 9 and 10 and CECF 34.1.1, where the pollack TAC was around 315 tonnes, the mean uptake by Spain and Portugal was estimated to be 63% for Spain and 23% for Portugal on average. Therefore, again the study concludes that the pollack TAC has not limited fisheries in ICES areas 9, 10 and CECF 34.1.1 during 2020-2022.

In addition, to estimating the TAC's effect on the different métiers, the study aimed to estimate what quota uptake in 2020-2022 would have been if the 2024 TAC for pollack was applied to those years. This analysis assumed constant catchability and two effort scenarios: the Status quo effort and a "Min" scenario, corresponding to the effort up to the calendar date where the pollack TAC would be exhausted and would choke the fishery. The "min" scenario is not exactly the same as in ICES MIXFISH but follows a similar approach. The simulation also accounts for options in quota swapping (in tonnes) between France and Spain's putative initial TACs (i.e. as estimated according to the Relative Stability key), and two assumptions for catchability (average 2020-22 or 2022 alone). The effect on socioeconomic indicators (GVA, Gross profit Net profit) is then deduced from these alternative quota uptake scenarios by tabulating the AER data. This "min" assumption means that fleets would stop fishing once the first TAC is exhausted, thus simulating a potential choke situation.

STECF notes that in its simulation work, the contractor has interpreted the request so that the initial TAC of 872 tonnes (for Bay of Biscay and Atlantic Iberian waters pol.27.89a),

reducing the TAC by -53% compared to 2023, would mean reducing the TAC for POL in division 8abde to 698 tonnes, with a provisional TAC for pollack of 500 tonnes for the first half of the 2024 year.

STECF observes that this analysis represents the “most restrictive” TAC scenario, and does not address other less restrictive options as requested by the MARE request (e.g., by -40%, -30%, etc.). Hence, the ad hoc report tested that setting the TAC at 500 tonnes in division 8abde for the entire year would result in fisheries closing on May 6, 2024 (i.e., assuming the “Min” option and no possibility for swapping quotas). This restrictive TAC ending up closing fisheries early in 2024 would require a much smaller fleet capacity in the Bay of Biscay compared to the status quo, and, therefore, employment support is likely to be reduced, with a loss of up to EUR 81 million (63% decrease of the base total income) with a substantial change in profit for almost all métiers toward negative profit.

STECF observes that the study does not provide elements to determine the level of TAC strictly needed to avoid the choking effect of the pollack TAC in divisions 8abde on the targeted fisheries of Sole and Norway lobster for the last six months of 2024, because it was not requested. The study only provides elements to determine the level of TAC needed to avoid pollack “choking” any of the métiers considered.

STECF observes that the study's main conclusion on the pollack TAC in 8abde is that “The choke effect, which is simulated in the scenarios using the Minimum effort deployment level, may be very important. The activity of these fleets has been more intense in the first two quarters of the year and therefore, choke is simulated to occur in Q2 (TAC=500t), Q3 (TAC=698t) or Q4 using the lower catchability observed in 2022 and assuming swaps from Spain to France.”

STECF observes that the study further concludes that “The minimum annual TAC required to deploy the total effort simulated (...) ranges from 1209 tonnes ([assuming] no swaps and mean catchability) to 824 tonnes ([assuming] swaps and 2022 catchability).” This answers the DG MARE request to estimate the pollack TAC that would not choke the French fleet in division 8abde.

STECF observes that the ad hoc study acknowledges uncertainties, including the possibility of higher prices due to lower supply (lower TAC) alongside potential price elasticities, likely mitigating the total effect of a reduced TAC in all the scenarios.

### Review of the IFREMER study

The Ifremer study provided aimed to re-run the ICES MIXFISH assessment with simulations of alternative TACs. It tested the incidence of scenarios leading to possible underutilization of fishing opportunities for a range of stocks arising from the 53% decrease in advised catch for the entire pollack stock over the three TAC subunits: POL/8ABDE, POL/8C and POL/9/3411 as an alternative to such a decrease. The study adopted the same modelling approach (i.e. FLBEIA) as used in the ICES WGMIXFISH advice. The approach does not build on actual TAC per area and country, but on total catches at the level of ICES-advised fishing opportunities, that are assumed split across the various fleets based on historical catch and effort data.

The study states that all the alternative TAC scenarios on pollack tested are aligned with the “min\_exHOM” effort scenario (“minimum effort excluding horse mackerel”) described in WGMIXFISH-ADVICE. This scenario corresponds to the level of effort that would be required to not overshoot any of the fishing opportunities for 2024 (the ICES-advised catches for all stocks but pollack), for each of the explored levels of pollack catch scenarios. However, this excludes the effect of the zero-advice on the horse mackerel stock (hom.27.2a4a5b6a7a-ce-k8) which is only a small bycatch in the demersal fisheries active

in the Bay of Biscay. This “min” assumption implies that fleets would stop fishing once the first TAC is exhausted.

STECF interprets the main conclusion of the IFREMER study as showing that among the alternative pollack TACs tested (-53%, -35%, -20%, and -0% compared to 2023 total TAC), even returning to the 2023 quotas in 2024 (i.e. testing a 0% change) would not result in the TACs for associated stocks being fully utilised by the French fleets. For example, a maximum of 75% of the sole TAC and 47% of the *Nephrops* TAC would be taken in 2024 if the pollack TAC for 2023 was maintained in 2024. Therefore, the pollack TAC would potentially choke the fleets fishing on sole and *Nephrops* with any reduction in TAC.

The Ifremer study shows that if -53% TAC reduction for the entire stock applies, then the following fleet segments would be limited in their activity: ES\_GNS\_24<40m, ES\_LLS\_24<40m, FR\_G\_\_\_<10m, FR\_G\_\_\_10<24m, FR\_LL\_\_\_<10-24, FR\_OTB\_10<24m. If the -20% TAC applies, the following segments would be limited: ES\_GNS\_24<40m, ES\_LLS\_24<40m, FR\_G\_\_\_<10m, FR\_G\_\_\_10<24m. This does not take account of the actual TAC split across countries and sub-areas.

By way of comparison the ICES MIXFISH advice for 2023 estimated that the fleets with the largest risk of being choked by the pollack TAC in 2024 were the trawl fleet FR\_OTB\_1824m with métiers *targeting Nephrops* and the polyvalent gillnetters FR\_G\_\_\_10m and FR\_G\_\_\_1024m with fisheries targeting sole.

#### Review of the SCOPE-Project study

STECF found the documents provided in the form of powerpoint presentations relating to the SCOPE study were difficult to understand and interpret. Therefore, STECF has based its comments mostly on the outcomes summarised in a letter from the French authorities. That letter stressed that if the TAC were reduced by -53 %, the French trawler fleet of 10 to 24 meters would be severely impacted and have to cease its activity to avoid catching pollack and risk exceeding the quota. For the French fleet, the revenue loss was estimated to be EUR 1.7 million for pollack only. However, it is unclear to STECF where such an estimate comes from and what it covers.

The letter from the French authorities also provides estimates of the date that the fisheries catching pollack in the Bay of Biscay would be closed in France by comparing the French 2022 and 2024 TACs. The study estimated that the fisheries would close on the 09/08/2024 if the -53% would apply, and 25/12/2024 if a 35% reduction was applied instead. It is unclear to STECF how these dates were derived.

As stated in the letter, the French authorities underline that, according to the results of the SCOPE study, and taking as a basis an ‘optimistic’ scenario concerning socio-economic variables not directly linked to fishing opportunities, half (51 % or 654 of the 1 291 vessels considered) of the vessels active in the Bay of Biscay may not be able to absorb such quota reductions. This figure is 100 %, considering the “pessimistic” scenario. The segments most affected will be *Nephrops* trawlers, bottom trawlers, and netters. These fleets, which account for 44 % (569 vessels) of the total fleet in the Bay of Biscay, have negative returns and, therefore, may be forced to cease their economic activity. It is unclear to STECF if such a cessation would happen regardless of the cut in the pollack TAC.

#### **STECF comments**

##### Comments on the anticipated quota uptake of Pollack in the Bay of Biscay for 2024

STECF observes that the ad hoc report has assessed the socioeconomic effects of the reduction in pollack TAC. The study has used DCF data and approved merging procedures (see STECF AER WG) to obtain estimates of catchability, GVA, profit, and affected FTE per

fleet metier alongside assumptions on quota uptake levels changing the effort (if “min” scenario) or not (if “status quo effort” scenario).

STECF acknowledges that the stock of pollack in the Bay of Biscay has changed category in the ICES procedure for advice in 2023, from a stock being advised following the “Precautionary approach” to a “MSY” stock. This has resulted in a change in how the Western Waters MAP applies to that stock.

STECF acknowledges that in recent years, the TAC for the pollack stock has not been restrictive, being set largely above the actual catches, and substantially above the ICES advice.

STECF acknowledges that setting the TAC in 2024 at the level advised by ICES is consistent with the MSY objective of the CFP.

STECF observes that the Ifremer study estimated that stopping the fishery after the exhaustion of the ICES advised 872 tonnes of pollack would result in taking 43% of the Nephrops (Nep.fu.2324) TAC in the Bay of Biscay and 50% of the sole (sol.27.8ab) TAC in 2024. The catches of smooth-hound (*Mustelus spp*) and seabass also appear impacted, with 41% and 51% of their respective TACs.

STECF notes that these percentages in the Ifremer study (scenario pol\_53) are not exactly the same as those presented in the ICES MIXFISH advice (Table 6.2.1 below). It is unclear to STECF why these results differ while apparently calculated with the same model. These discrepancies do not though affect the general perception of which species are most affected by pollack restriction in the mixed fisheries.

Stock	Single-stock catch advice 2024	nep	pol	sol
ANK	25579	0.99	0.88	0.91
BSS	2642	1.16	0.56	0.95
HKE	72839	0.97	0.85	0.94
HOM	0	0	0	0
MAC	739386	1.01	1.01	1.01
MEG	23303	1.08	0.93	0.97
MON	35502	1.02	0.92	0.96
NEP	5786	1	0.30	0.49
POL	872	2	1	1.91
SDV	5329	1.24	0.42	0.70
SOL	2489	1.21	0.51	1
WHB	1529754	1.02	1.02	1.02
WHG	1347	1.78	0.84	1.26

*Table 6.2.1. Extracted from ICESMIXFISH-ADVICE 2023 (published in 2024) Table 2.8. This shows what would be the multipliers to be applied on the single stock catch advice in tons to predict hypothetical repercussions on catches in tons of nep, pol, or sol and other stocks in 2024 if the TAC of nep, or pol, or sol would be taken up fully in 2024 (i.e. when nep, or pol or sol multipliers at 1). For example, taking up 100% of the POL advised catch would result in taking 30% of the NEP-advised catch and 51% of the SOL-advised catch for 2024. On the other hand, taking up 100% of the NEP TAC would lead to taking twice the advised catch on POL.*

#### Comments on the procedure to anticipate socioeconomic effects of a low TAC (on pollack)

STECF observes that, as a general procedure, an estimate of the potential foregone landing value can be derived per fleet segment from the gap between the number of days at sea

that would be required to catch the least restrictive quota (knowing the most recent species catchability and the average value per day of this segment for the first two quarters) and the days for exhausting the quota of the possible choke species. The savings on operating costs could also be deduced from this difference, as well as the resulting part of the affected GVA and impacted engaged crew using information from the AER dataset. STECF observes that this is the procedure that the ad hoc contractor followed.

As an important point, STECF notes that all the studies provided as background information estimated the effect of a restrictive pollack TAC assuming a strict implementation of the landing obligation, (i.e. assuming that the fishery would be closed after the exhaustion of that TAC, i.e. "min"-like scenarios). STECF has repeatedly documented in previous advice that such closures and choke situations have not yet been observed and that discarding is likely to be still occurring. Therefore, STECF underlines that care be taken in the interpretation of the outcomes of the studies, which represent the "worst-case" estimates of economic impacts. STECF considers that the actual observed impacts may eventually prove to be less than these estimates even if the TAC is maintained at the level advised by ICES given discarding of pollack may occur.

#### *Comments on the anticipated effect on French target NEP and SOL fisheries in the Bay of Biscay*

STECF observes that the ad hoc contract complemented the risk assessment of reducing the pollack TAC with some bioeconomic estimates based on the AER fleet segment dataset.

STECF notes that the various documents provided to STECF present different methods to assess the expected magnitude of potential choke situations triggered by a reduced pollack TAC. Therefore, STECF notes that the studies give rather different outcomes in their quantitative estimates of expected impacts and identification of the most impacted fleets and fisheries.

However, STECF notes that the studies are globally consistent in identifying potential choke situations and socioeconomic effects if the fishery would close after the exhaustion of the 53% TAC reduction, both for medium-size trawler fleets and smaller size fleets using fixed gears.

#### *Other factors affecting the profitability of the Bay of Biscay fleets*

STECF observes that in the Bay of Biscay, other factors may affect the profitability including:

- 1) The adoption of 1-month compulsory closure of fisheries in the Bay of Biscay (22 Jan-20 Feb) aimed at the protection of cetaceans applying to: i. fishing vessels of any flag operating in the area; ii. Fishing vessels > 8m LOA; iii. The following fishing gears OTM; PTM; PTB; GTR; GNS; PS;
- 2) The setting of a recreational allocation, in the Fishing Opportunities Regulation for 2024, of a 2 fish/day bag limit in ICES subareas 8, 9, 10.

Concerning point (1), STECF observes that the 1-month closure occurs at the beginning of the year, when substantial pollack catches occur. Therefore, it would likely delay the effect of the TAC reductions to later in the year.

Concerning point (2), STECF observes that Regulation (EU) 2024/257 refers to the recreational fisheries for Pollack and stipulates that: "*According to scientific advice, recreational catches of pollack in ICES subareas 8, 9, 10 and Union waters of CECAF 34.1.1 (Bay of Biscay and Iberian waters) are non-negligible and it is therefore appropriate to introduce limits to its recreational fishery in those areas. In order to protect the spawning grounds and limit juvenile catches, no specimen of pollack may be caught and retained from 1 January to 30 April in recreational fisheries, while the maximum of two specimens could be allowed for the remaining part of the year.*"



Considering that recreational catches are not included in the ICES assessment, STECF is unable to estimate the impact of that measure. Furthermore, since these catches are not included in the ICES advice for 2024, any changes or restrictions of recreational fisheries will not affect the calculation of the advised fishing opportunities for commercial fisheries.

### **STECF conclusions**

STECF concludes that the various documents provided to STECF present different ways of assessing the expected magnitude of potential choke situations triggered by a reduced pollack TAC. Hence, they provide different outcomes in their quantitative estimates of expected impacts.

Despite these differences, STECF concludes that the studies are globally consistent in identifying potential choke situation and socioeconomic effects if the 53% TAC reduction would be applied to the pollack TAC, assuming full implementation of the landing obligation and closing of the fishery after exhaustion of the TAC.

STECF is not able to quantitatively assess the true scale of impacts that will occur if the pollack TAC is maintained at the level advised by ICES. There are several confounding factors, such as doubts around the implementation of the landing obligation, the effectiveness of measures applied in recreational fisheries as well as the one-month closure in the Bay of Biscay earlier in 2023 which limit the accuracy of the assessment that can be provided.

STECF concludes that the ICES single-stock advice is based on the best available biological and ecological science and does not directly account for socioeconomic considerations nor mixed fisheries issues. However, exceeding the MSY advice in 2024 may lead to a further deterioration in this stock in the following years. Therefore, STECF cannot advise a TAC level for pollack in the Bay of Biscay beyond the level advised by ICES.

STECF concludes that there will always be a risk of a choke in mixed fisheries managed by single stocks TACs, and such an effect is increasingly likely when several stocks being caught together are on a declining trend as in currently the case in the Bay of Biscay. There are mechanisms within the CFP such as swapping as well as through improvements in selectivity and reducing effort to adapt to changes in TACs that might alleviate some of that risk in the short term, but deteriorating conditions of stocks productivity may ultimately require longer term prospective to maintain the fisheries sustainable and resilient.

### **References**

ICES. 2023. Pollack (*Pollachius pollachius*) in Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters). In Report of the ICES Advisory Committee, 2023. ICES Advice 2023, pol.27.89a, <https://doi.org/10.17895/ices.advice.2184101>

ICES. 2023. Working Group on Mixed Fisheries Advice (WGMIXFISH-ADVICE). ICES Scientific Reports. 5:106. 272 pp. <https://doi.org/10.17895/ices.pub.24496237>



### **6.3 Assessment of A Joint Recommendation regarding fisheries management measures under article 11 and 18 of the CFP Regulation for protection of sandbanks at two Natura 2000 sites designated under the Habitats Directive**

#### **Background provided by the Commission**

The Netherlands and Germany submitted a joint recommendation proposing conservation measures to manage fisheries in several areas of the Dutch and German parts of the Dogger Bank. The overall aim is to ensure the protection of sandbanks which are slightly covered by sea water all the time (habitat type H1110) in accordance with the Habitats Directive 92/43 EEC. The purpose of the fisheries management measures is to reduce the pressure on the benthic habitat from bottom contacting fishing gear and contribute to achieving conservation objectives in accordance with the Habitats Directive.

The German and Dutch management zones will be closed to the following mobile bottom contacting gear types: beam trawl (TBB), bottom otter board trawl (OTB, OTT, PTB, TBN, TBS, TB) and dredges (DRB, HMD). In addition, the German and Dutch management zones will also be closed to demersal seines: Danish anchor seine (SDN), Scottish seine (fly dragging) (SSC), Scottish pair seine (fly dragging) (SPR), Seine nets (not specified) (SX) and boat or vessel seine (SV).

#### **Request to the STECF**

STECF is requested to review and make any appropriate comments and recommendations following the reports from two dedicated ad-hoc contracts with relevant experts to support the evaluation of the joint recommendation.

STECF is requested to:

- Review the suitability and potential effectiveness of the proposed conservation measures to minimise the negative impacts of fishing activities on the marine ecosystem and ensure that fisheries activities avoid the degradation of the marine environment;
- Assess to what extent the proposed measures: a) correspond to the ecological requirements of the habitats and species protected in the relevant Natura 2000 sites and contribute towards achieving conservation objectives of the sites; b) Assess to what extent the proposed measures are capable of preventing deterioration of habitat types, habitat of the species and significant disturbance of species protected in the site, as required by the Habitats Directive. If the assessment shows that the proposed measures are insufficient, identify any additional measures needed to: a) prevent deterioration of habitat types, habitat of the species and significant disturbance of species protected in the site; b) achieve conservation objectives of the sites;
- Comment on whether the proposed control, enforcement and compliance regime (comprising alert zones surrounding the management areas and monitoring of vessel position) are adequate and sufficient to ensure a proper enforcement of the measures proposed for the management zones;
- Comment on how the proposed conservation measures may affect fishing activity of the fleets that currently operate in the proposed management

zones. This should include identification of the fleets concerned, their economic dependence on the proposed management zones, their potential to reallocate the fishing activity and potential economic and ecological consequences.

### **Information provided to STECF**

STECF was provided with:

- The Joint Recommendation for Offshore Fisheries Management on the International Dogger Bank under the Common Fisheries Policy document of 19 October 2023, that specifies the proposed measures to be implemented and control provisions
- Annex I Background document to the JR in the Dogger Bank. This report provides the context, process, fisheries background and the scientific support for the JR.
- Six zip files with the coordinates of the Dutch and German Dogger Bank areas, the proposed closed areas and the warning zones.
- A report (Van Hoey & Bastardie, 2024) describing the work and results of the two ad-hoc contracts.

### **STECF comments**

STECF notes that the Joint Recommendations (JR) is accompanied by comprehensive supporting documentation citing relevant scientific investigations. However, as the process of drafting the JR was initiated about 15 years ago and was not updated, STECF notes that the data used is 5-10 years old originating from the period 2010-2015 for most fisheries and up to 2019 for seine fisheries.

STECF notes that the two ad-hoc contracts combined in one report (Van Hoey & Bastardie, 2024) were carried out based on the same four ToRs provided to STECF as detailed above. STECF considers that the ad-hoc contracts adequately addressed the TORs.

STECF notes that STECF EWG 19-04 analysed, in conjunction with other JRs, a very similar JR for the Dogger Bank as submitted. The current JR differs in that it now no longer includes the UK part of the Dogger Bank due to Brexit. Additionally, the control and enforcement provisions have been updated in line with the conclusions of STECF 19-04 relating to changing the spatial data transmission frequency from 30 min to every 10 minutes.

As in the previous assessment by STECF in 2019, STECF notes that the conservation objectives of the German and Dutch Dogger Bank Sites of Community Importance (SCI) are defined and are still currently evaluated as unfavourable, due to significant habitat disturbance because of (mobile bottom-contacting) fishing. According to the JR, fishing has distorted the species composition towards smaller and short-lived species.

STECF notes that the measures included in the JR are: a) several areas closed to beam trawls, otter trawls, dredges and seiners in the German and Dutch Dogger Bank, b) alert zone of 4 nm around the closed areas c) of a combination of surface and aerial surveillance and remote monitoring of vessel position.

STECF notes that the area proposed to be closed in the JR of the Dutch and the German Dogger Bank corresponds to 36% of the entire Dogger Bank area and not 33% as stated in the JR. This revision is based on the analysis performed by the ad-hoc contracts, which reviewed the shape files provided by Member States and calculated the area of the proposed closed areas.

STECF notes that there is an updated study of the fisheries activities in the Dutch part of the Dogger Bank (Hamon & Klok, 2023). This is not referred to in the JR nor in the 2 ad-hoc contracts. The study concludes that over the 2014-2021 period, the amount of fishing

activities has decreased significantly in the Dutch part of the Dogger Bank. According to this study, total effort in decreased from 83 fishing days in 2015 to 29 fishing days in 2021 and the added value decreased from 1.0 to 0.2m euros.

*TOR 1: Review the suitability and potential effectiveness of the proposed conservation measures to minimise the negative impacts of fishing activities on the marine ecosystem and ensure that fisheries activities avoid the degradation of the marine environment*

STECF notes two aspects need to be consider when analysing the potential impact of fishing in benthic communities (i.e., the penetration of gear components on the seafloor and the total surface area disturbed). According to the ad-hoc contract, dredges are known to have the highest penetration, followed by beam and other trawls. Seines have much lower penetration. Conversely, seine fisheries have the highest total disturbed surface area, followed by otter trawls, beam trawls and dredges. Therefore, the inclusion of all those gear groups is necessary to minimise the negative impacts of fishing and avoid the fishery-based degradation of the marine environment.

In this context, STECF notes that the proposed conservation measures in the Dogger Bank represents a positive step forward towards (i) minimising the negative impacts of fishing activities (36% of the Dutch and German Dogger Bank will be closed for beam trawl, bottom/otter trawl, dredges and demersal seines) on habitat type H1110 (sand banks which are slightly covered by sea water all time) and its biological communities, and (ii) ensuring that fisheries activities avoid the degradation of the marine environment as stipulated under Article 2(3) of the Regulation 1380/2013.

Regarding point (i), STECF reiterates the conclusion from STECF 19-04 that for most fish species, the magnitude of any effects of the measures will mostly depend on species distribution. Benthic species such as flatfish and sandeel should be able to increase biomass with a possible spill-over effect outside the closed areas.

Regarding point (ii), STECF notes that, according to the ad-hoc contract, because many species are still present within the wider area and the type of environment (shallow, dynamic system), the continuation of the fishery activities in the open zone will probably not lead to further deterioration of the community structure. Additionally, despite historical fishery activities, there is a good restoration potential to improve the occurrence and distribution of these species within the wider area. This effect is even more important considering that the closed areas are of significant size and protect relevant sensitive habitat types.

*TOR 2: Assess to what extent the proposed measures: a) correspond to the ecological requirements of the habitats and species protected in the relevant Natura 2000 sites and contribute towards achieving conservation objectives of the sites; b) Assess to what extent the proposed measures are capable of preventing deterioration of habitat types, habitat of the species and significant disturbance of species protected in the site, as required by the Habitats Directive.*

STECF considers that the proposed measures may contribute towards ensuring that the habitats and species addressed in the joint recommendation are maintained and restored at favourable conservation status. By closing areas to bottom contact fisheries, the shape, the form and composition of the habitat and its substrate will only reflect the natural disturbance (waves, currents) conditions. The occurrence of benthic species (macrobenthos, epibenthos, fish) are strongly driven by the physical structure of the habitats. Therefore, if the physical structure is restored to its natural variability, the prerequisite to allow for recovery of the benthic fauna is met. However, STECF notes that fishing with bottom contacting gears will still continue in 64% of the larger Natura 2000 site meaning a large part of the Dogger Bank area will continue to be impacted.

STECF notes that the potential of fully restoring the benthic habitat quality in the Dogger Bank SCI is dependent on the implementation of similar protection measures in the UK zone, as the Dutch and German proposed closures do not cover all benthic habitat types. The consequences of such decoupling in meeting the conservation goals are not considered in the present 2024 JR.

STECF reiterates STECF 19-04 considerations that any resulting changes in status of the three different benthic communities occurring on the Dutch and German areas of the Dogger Bank are likely to differ, due to differences in species composition, population dynamics and sensitivity to fishing impacts. Concerning likely progress over a 6-year period, given the lifespan of typical species, STECF notes that for some species with a lifespan of less than 6 years, recovery would be possible in this period.

STECF reiterates the conclusion of STECF 19-04 that a common and coordinated monitoring program for the whole Dogger Bank should be established and implemented by each Member State. STECF notes that the ad-hoc report states that 6 years is too short a period to check recovery and suggests a 12-year monitoring period. STECF observes that 12 years is too long a period for assessing recovery and would advocate the 6-year interval should be maintained. The results after 6 years of such monitoring may improve understanding and provide better scientific guidance for the appropriate location and size of the areas needed to achieve conservation objectives. Furthermore, different indicators may need to be considered for each of the five benthic communities identified on the totality of the Dogger Bank (three in Dutch, German waters and two in UK waters), due to differences in species composition and response to changes in fishing pressure.

*TOR 3: Comment on whether the proposed control, enforcement and compliance regime (comprising alert zones surrounding the management areas and monitoring of vessel position) are adequate and sufficient to ensure a proper enforcement of the measures proposed for the management zones.*

STECF notes that in addition to the control, enforcement and compliance measures contained in Regulation (EC) No 1224/2009, the JR proposes that the authorities of the coastal Member state shall be notified when fishing vessels enter the alert and management zones through an entry-exit scheme. In addition, STECF notes that vessels carrying prohibited gears are only permitted to transit the management and alert zone if the prohibited gears are lashed and stowed and the speed is not less than 6 knots. Furthermore, within the alert and management zone these vessels are required to transmit, through their vessel monitoring system, data on vessel identification, geographical position, date, time, course and speed every 10 minutes to the authorities. The data can also be transmitted through GPRS/GSM signal. If a signal is not available, the data shall be safely stored and forwarded to the authorities on its request.

STECF notes that STECF 19-04 concluded that due to the size and irregular shape of the management areas, a ping frequency of 30 min (as proposed in the previously submitted JR) might not be frequent enough for the authorities to monitor vessels in the management zones. However, STECF notes that in accordance with the advice from STECF 19-04 the JR has now updated the ping frequency to every 10 minutes. STECF notes that continuous monitoring of vessels with a submission frequency in close to real time would provide even more effective monitoring of vessels in the management areas.

*TOR 4: Comment on how the proposed conservation measures may affect fishing activity of the fleets that currently operate in the proposed management zones (identification of the fleets concerned, their economic dependence on the proposed management zones, their potential to reallocate the fishing activity and potential economic and ecological consequences).*

STECF notes that the ad-hoc contract provided an analysis of the fleets operating in the Dogger Bank between 2010-2015, except for seiners that is analysed up to 2019. As stated before, there was no update on the data submitted in the 2024 JR. Therefore, the analysis provided by the ad-hoc contract reflects the fleet activity from 5-10 years ago. This means it is unlikely to reflect current fisheries operating in the Dogger Bank area, which has been altered by measures introduced following from Brexit, the ban on pulse trawling, but also the decrease of targeted stocks (e.g. North Sea sole, sandeel).

Nevertheless, STECF notes that the two main species targeted in 2015 (2019 for seiners) on the Dogger Bank are sandeel for the German, Danish and Swedish demersal trawls and seines, and plaice for the Dutch and UK beam trawl and otter trawl fleet but also Belgium and UK seiners. All other species have much lower landings. Hamon & Klok (2023) confirms that, at least in the Dutch part of the Dogger Bank, sandeel and plaice are the main targeted species by the Danish and the Dutch trawl and seine fleets, respectively. Sprat is also an important target by the Danish demersal trawl fleet.

STECF notes based on the ad-hoc contracts and the Hamon & Klok (2023) study, that the most important fisheries in the Dogger Bank that will be affected by the closure proposal would include: beam trawl demersal fisheries, bottom trawl demersal fisheries, sandeel fisheries, and seine fisheries.

STECF notes that the data available did not allow for a comprehensive analysis to determine the fleets economic dependence and effort displacement. This would require detailed VMS-logbook linked data disaggregated to the country and fisheries level in the North Sea. Nevertheless, based on a comparative analysis of maps of landing value per fishing gear made in the ad-hoc contract (Figure 6.3.1), STECF notes that the landing value per unit of surface is less in the suggested closed areas than outside it for all the types of fishing techniques. The value of landings has decreased in recent years.

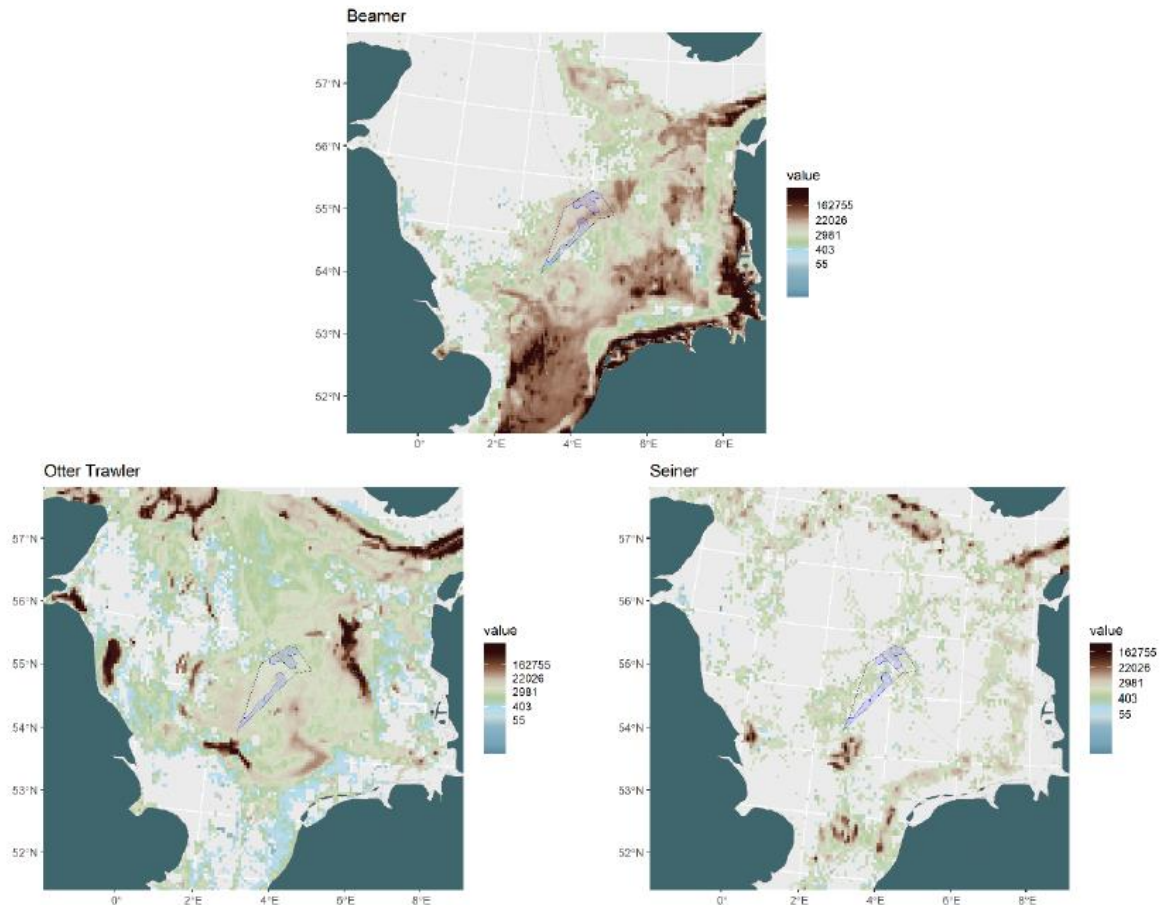


Figure 6.3.1 - Landing value (euros) gridded per 0.05 c-square averaged over 2014 to 2020 deduced from VMS data delivered to the OSPAR. The two blue polygons are the two suggested areas for excluding mobile bottom contacting gears, as indicated by the 2024 JR. The polygon delimits the Dogger Bank area on the EU side only (Van Hoey & Bastardie, 2024).

STECF notes that according to Hamon & Klok (2023), in economic terms, the Danish fleet was the most important in the Dutch part of the Dogger Bank representing about 60% of the total Gross Value Added (GVA), while the average total contribution to GVA for this area was approximately 0.6m euros. The total landings decreased from a high of 6,400 tonnes in 2014 to 500 tonnes in 2021.

Regarding the economic dependency of the Dutch fleet operating in the Dutch part of the Dogger Bank, Hamon & Klok (2023) report that it was lower than 10% for most vessels. In summary, the Dutch part of the Dogger Bank has had a low but stable importance economically for Danish bottom otter trawlers and has become decreasing importance for Dutch beam trawlers since 2015.

### STECF conclusions

STECF concludes that the proposed conservation measures in the Dogger Bank represent a positive step forward towards (i) minimising the negative impacts of fishing activities (36% of the Dutch and German Dogger Bank will be closed for beam trawl, bottom/otter trawl, dredges and demersal seines) on habitat type H1110 (sand banks which are slightly covered by sea water all time) and its biological communities, and (ii) ensuring that

fisheries activities avoid the degradation of the marine environment as stipulated under Article 2(3) of the Regulation 1380/2013.

STECF concludes that the proposed measures may contribute towards ensuring that the habitats and species addressed in the recommendation are maintained and restored at favourable conservation status.

STECF notes that the potential for fully restoring the benthic habitat quality in the Dogger Bank SCI is dependent on the implementation of similar protection measures in the UK zone, as the Dutch and German part are not covering all benthic habitat types.

STECF also reiterates STECF 19-04 conclusion that a common and coordinated monitoring program for the whole Dogger Bank should be established and implemented by each Member State and by the UK.

STECF concludes that the control and enforcement measures of the JR have been updated in accordance with previous STECF advice and appear adequate and sufficient to ensure a proper enforcement of the measures proposed for the management zones.

STECF concludes that the data available did not allow for a comprehensive analysis to determine the economic dependence of the fleets on the areas and effort displacement following from the closure of the areas. This would require recent and detailed VMS-logbooks linked data disaggregated to the country and fisheries level in the North Sea.

STECF concludes that based on the information provided, although the impact of the closed areas on the fisheries may be low, the supporting data is 5-10 years old and should be updated to verify this is the case.

## References

Hamon, K.G. and Klok, A. 2023. Overview of the International Fishing Activities on Protected Areas in the Dutch part of the North Sea; Fishing activities of the Dutch, Danish, German, Belgian, Swedish and French fleet for the period 2014-2021. Wageningen, Wageningen Economic Research, Report 2023-023. 96 pp.

Van Hoey, G & Bastardie, F. 2024. Evaluation report of the proposed conservation measures for the Dutch and German parts of the Dogger Bank area. Ad-hoc contracts 2408 and 2407. 25 pp.

## 6.4 Information on QualiTrain project developments on data quality tools

### Background provided by the Commission

QualiTrain project (FRAMEWORK CONTRACT Med & BS – EASME/EMFF/2020/OP/021, Specific Contract No. 3) was launched in December 2022 to implement technical work on quality checks and data checking, as well as prepare, coordinate and organise technical trainings and information sessions on consolidated data quality R tools.

The project QualiTrain is structured in 6 tasks:

Task 0: Project management and coordination

Task 1: Finalisation and consolidation of data quality checks applied during EWG 22-03.

Task 2: Carrying out data quality checks for the 78 remaining stocks of annex II (not checked by EWG 22-03).

Task 3: Proposal of additional stocks driving the fishery for each MS in the Med & BS and carrying out of data quality checks for these stocks.

Task 4: Organisation, preparation and carrying out of trainings for Med & BS national experts.

Task 5: Advise on the way forward, in terms of improving data coverage and quality in the Med & BS region.

In particular, Task 1 consolidated two R tools, namely RDBqc (working on commercial data, <https://github.com/COISPA/RDBqc>) and RoME (working on rough survey data in MEDITS format, <https://github.com/COISPA/RoME>), aimed at carrying out data quality checks on the following data call formats to store aggregated data:

MARE & BS: [https://dcf.ec.europa.eu/data-calls/medbs\\_en](https://dcf.ec.europa.eu/data-calls/medbs_en)

FDI: [https://dcf.ec.europa.eu/data-calls/fdi\\_en](https://dcf.ec.europa.eu/data-calls/fdi_en)

AER (only for cross-checks): [https://dcf.ec.europa.eu/data-calls/aer\\_en](https://dcf.ec.europa.eu/data-calls/aer_en)

GFCM DCRF: <https://www.fao.org/gfcm/data/dcrf/en/>

Task 1 integrated in RDBqc and RoME the data quality functions developed in STREAM3, RDBFIS [2] and MEDITS (Bertrand et al., 2022 and Spedicato et al., 2019) coordination group initiatives, extensively documenting the tools and provided worked examples in Vignette.

The two R tools were also integrated in the Regional Data Base for Mediterranean and Black Sea (RDBFIS4) in order to internally check the data before the submission to the end-users.

Finally, the two tools will be used to carry out the quality checks in the tasks 2 and 3 of QualiTrain project and will be used in the training organized in task 4 to disseminate the use of these tools among the experts, of the different MS, involved in the preparation of the data calls. A first online training took place with Med & BS national experts on 3-5

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3 <https://datacollection.jrc.ec.europa.eu/mare-2016-22-strengthening-regional-cooperation>

4 <https://medbsrdb.eu/>



October 2023 and a second training will take place on 15-19 April 2024 in Bari, Italy (registrations open until 17th March 2024).

### Request to the STECF

STECF is requested to take note of the Qualitrain project and the possible synergies of the Qualitrain outcomes to STECF work and to identify the relevant EWGs, linked to DG MARE data calls, the importance of limiting, to the extent possible, modifications to the current templates of the data calls listed above, as this would result in the need to modify not only the R packages using those formats but also to verify again the integration of the packages within the Regional Data Base for Mediterranean and Black Sea (RDBFIS). The Qualitrain coordinator (Isabella Bitetto) is available to present the point in the relevant EWGs, should this be considered relevant.

STECF is requested to draw the attention of the relevant EWGs to the fact that, including new fields in the middle of the previous template columns and modifications of the names of the columns, unless necessary, will have a significant impact on the ongoing work of consolidating data quality checks in the Med & BS.

When a modification is considered necessary, we kindly ask to keep the Qualitrain coordinator (Isabella Bitetto, [Bitetto@fondazionecoispa.org](mailto:Bitetto@fondazionecoispa.org)) and the RDBFIS coordinator (Stefanos Kavadas, [stefanos@hcmr.gr](mailto:stefanos@hcmr.gr)) informed, in order to plan the package modifications accordingly.<sup>5</sup>

### STECF comments

STECF acknowledges the work done in the QualiTrain project and considers that the data quality checks developed are helpful in detecting errors in data required for stock assessment in the Mediterranean and Black Sea.

STECF notes that this study is aimed at improving the quality of the data for stocks in the Mediterranean and Black Sea other than those usually assessed at STECF and GFCM level. This may allow increasing the number of stock assessments in the different areas in the Mediterranean and Black Sea and improve the coverage of scientific advice.

STECF notes that two new R tools for quality checks have been consolidated to facilitate the corrections of errors in the data submitted to the main data calls in the Mediterranean and Black Sea region (MED&BS, FDI, RCG, GFCM DCRF).

STECF notes that the QualiTrain R tools are specifically designed to support the work of national experts and National Correspondents (NC)s in checking and preparing data before data submission. The use of these tools by the national experts involved in the data collection program is expected to reduce data failures in future submissions. STECF notes that both the RDBqc R package and RoME package are available on the GitHub public repositories (<https://github.com/COISPA/RDBqc> and <https://github.com/COISPA/RoME>, respectively).

STECF notes that the two R-packages are focussed on quality checks and preparation of the biological data requested by the Med&BS data call. Specifically, RDBqc works for the biological data collected from the monitoring of commercial fisheries, while RoME originates

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<sup>5</sup>Bertrand, Jacques A., et al. "The general specifications of the MEDITS surveys." *Scientia marina* 66.S2 (2002): 9-17.

Spedicato, Maria Teresa, et al. "The MEDITS trawl survey specifications in an ecosystem approach to fishery management." *Sci. Mar* 83.S1 (2019): 9-20.

from the trawl survey data (e.g., MEDITS). However, the QualiTrain routines are also performing some cross-checks between the Med&BS data call data and the FDI and AER data.

STECF acknowledges that the two packages and routines will be incorporated into the Med&BS regional database. This database is currently under a testing phase through the RDBFIS II project.

STECF notes that training and dissemination activities for the national experts involved in the Data Collection Program were planned and deployed during the QualiTrain project. Furthermore, two internal workshops will be delivered shortly by the experts of the QualiTrain consortium. These workshops are aimed at carrying out quality checks on the data related to stocks not routinely scrutinised by STECF EWGs.

STECF notes that the main outcome of these workshops will be the list of records to be checked by each Member State (possibly through the Data Transmission Monitoring Tool, DTMT).

STECF notes that the use of R packages and scripts, also implemented within the Med&BS regional database (RDBFIS) allows building a reproducible and transparent framework facilitating harmonisation among Member States.

STECF notes that including new fields or modifications of the current templates of the DG MARE data calls will have a significant effect on the ongoing work of consolidating data quality checks in the Med&BS.

STECF acknowledges that a specific TOR on the testing of QualiTrain data quality check tools is foreseen under EWG 24-02: Methodologies for Mediterranean stock assessments and the estimation of reference points. STECF considers that the following EWGs should be informed on the QualiTrain and RDBFIS II projects:

- EWG 24-03: Annual Economic Report on the EU Fishing Fleet I;
- EWG 24-07: Annual Economic Report on the EU Fishing Fleet II;
- EWG 24-08: Evaluation of the Annual Reports for data collection and data transmission issues;
- EWG 24-10: Stock assessments in the Western Mediterranean Sea;
- EWG 24-11: Evaluation of Fisheries Dependent Information (FDI) for EU Fleets;
- EWG 24-15: Evaluation of Work Plans for data collection and data transmission issues.

## **STECF conclusions**

STECF concludes that the data quality check tools consolidated by the QualiTrain project and implemented within the RDBFIS (Med&BS regional database) are useful for Mediterranean and Black Sea Member States to check data quality before data submission.

STECF agrees experts attending EWGs linked to DG MARE data calls as well as the Med&BS stock assessment should be informed on the QualiTrain data quality checking tools and Med&BS regional database.

STECF agrees on the importance of limiting, to the extent possible, modifications to the current templates of the EU data calls, as this would result in the need to modify not only the R packages, but also to verify the integration of the packages within the Med&BS regional database (RDBFIS). Furthermore, if the templates need to be revised, the changes should be discussed with the Member States, (e.g., at RCG meetings).

## **6.5 Evaluation of the West Mediterranean EU MAP in line with Art.17 (2) of Regulation EU 2019/1022**

### **Background provided by the Commission**

In line with Art 17 (2) of the the West Med MAP, by 17 July 2024 and every three years thereafter, the Commission shall report to the European Parliament and to the Council on the results and impact of the plan on the stocks concerned and, on the fisheries, exploiting those stocks, in particular as regards the achievement of the objectives set out in Article 3.

### **Request to the STECF**

STECF is requested to review and make any appropriate comments and recommendations on the achievement of the objectives set out in Article 3 (1 and 2) of the West Med MAP since its adoption and up to the most recent year of implementation and scientific advice:

1. The plan shall be based on a fishing effort regime and shall aim to contribute to the achievement of the objectives of the CFP listed in Article 2 of Regulation (EU) No 1380/2013, in particular by applying the precautionary approach to fisheries management, as well as to ensure that exploitation of living marine biological resources restores and maintains populations of harvested species above levels which can produce MSY.
2. The plan shall contribute to the elimination of discards by avoiding and reducing, as far as possible, unwanted catches, and to the implementation of the landing obligation established in Article 15 of Regulation (EU) No 1380/2013 for the species which are subject to minimum conservation reference sizes under Union law and to which this Regulation applies.

### **STECF comments**

STECF PLEN 24-01 has carried out a review of the objectives of the West Med MAP as set out in Articles 3 (1 and 2) of Regulation (EU) 2019/1022. However, STECF stresses that this is a limited review given the time available and takes from the findings and conclusions from EWGs 20-13, 21-01, 21-13, 22-01, 22-11, 23-01 and 23-11.

STECF observes that Regulation (EU) 2019/1022 covers 6 species, Blue and red shrimp (ARA), Giant red shrimp (ARS), Norway lobster (NEP), Deep-water rose shrimp (DPS), European hake (HKE) and Red mullet (MUT) for which 14 stocks are assessed through a fully analytical assessment.

Figures 6.5.1 and 6.5.2, show the trends of  $F/F_{msy}$  and  $B/B_{msy}$  by management unit (EMU 1 which encompasses GSAs 1, 2, 5, 6, 7; and EMU 2 which encompasses GSA 8, 9, 10, 11) are reported. For ease of visualisation, the horizontal dashed black line highlights the value of 1 for the indicator which corresponds to the main objective of (EU) 2019/1022 (i.e.  $F=F_{msy}$ ), and a vertical solid line for the year 2020, which was the first year of implementation of Regulation (EU) 2019/1022.

STECF observes that currently 4 (DPS 1, DPS 5-6-7, MUT 7 and MUT 9) out of 14 stocks show a value of fishing mortality equal or below the reference level ( $F/F_{msy} \leq 1$ ), while 2 stocks (MUT 7 and MUT 9) show a corresponding biomass equal or above the reference threshold ( $B/B_{msy} \geq 1$ ), noting this indicator is not available for DPS 1 and DPS 5-6-7.

STECF observes that 3 out of 14 stocks have spawning stock biomass (SSB) levels estimated to be below Blim (Figure. 6.1.3). They are European hake stocks in both EMUs and the stock of Norway lobster in GSA 6.

STECF observes that the median across stocks of the  $F/F_{msy}$  values in 2022 is  $\sim 1.81$ , while the mean value is  $\sim 2.17$ , showing that the level of exploitation is still roughly twice sustainable levels across the assessed demersal species in the western Mediterranean (Figure. 6.1.4). When comparing EMU 1 and EMU 2, the median and mean values are higher ( $\sim 2.61$  and  $\sim 3.21$ ) in EMU 1 (Figure 6.1.5), than in EMU 2 ( $\sim 1.29$  and  $\sim 1.37$ ) (Figure 6.5.6).

STECF observes that both the median and mean of the  $B/B_{msy}$  values across stocks in 2022 are  $\sim 0.49$  (Figure. 6.1.3). When comparing EMU 1 and EMU 2, the median and mean value are lower ( $\sim 0.39$  and  $\sim 0.28$ ) in EMU 1 (Figure 6.5.4), than in EMU 2 ( $\sim 0.74$  and  $\sim 0.64$ ) (Figure 6.5.5).

STECF observes that there is a decreasing trend in  $F/F_{msy}$ , mainly driven by EMU 2. However, in both EMU's this trend starts in 2019 one year before the implementation of Regulation (EU) 2019/1022. STECF notes that the decreasing trend in  $F/F_{msy}$  is faster than the increasing trend perceived in biomass, even though median  $B/B_{msy}$  in 2022 is the highest value of the time series (again driven by EMU 2) (Figures 6.5.4-6.5.6). This may be due to the inertia of biomass to react to changes in fishing mortality, but the expected trend in biomass would also be more variable than the  $F$ -trend due to the impact of recruitment variation.

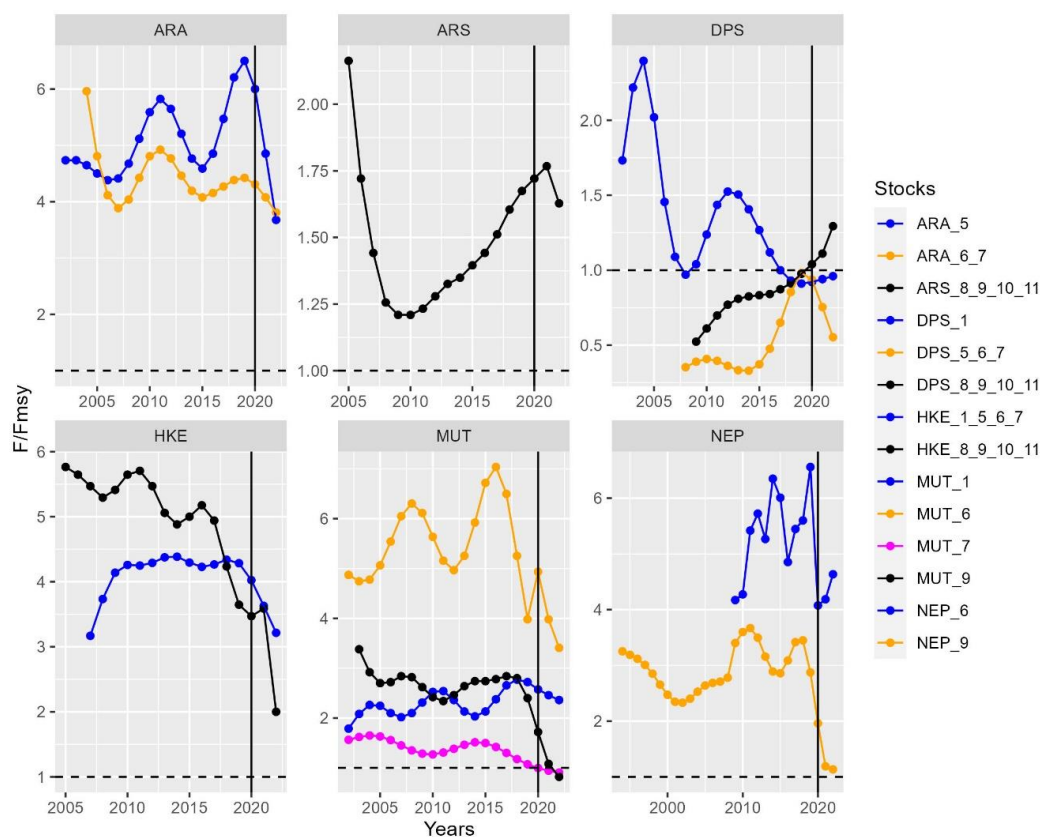


Figure 6.5.1. Trends of  $F/F_{msy}$  by stock. Stocks from EMU 2 are in black.

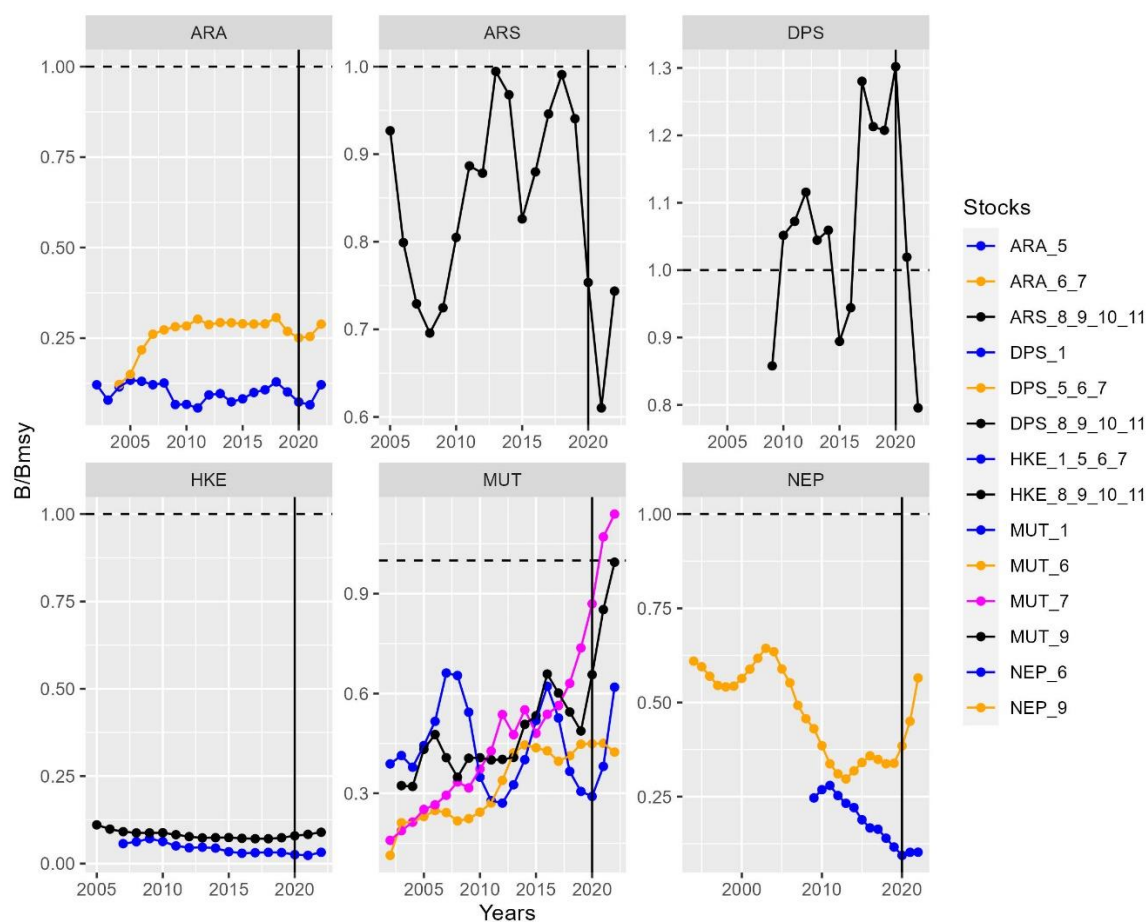


Figure 6.5.2. Trends of B/Bmsy by stock. DPS\_1 and DPS\_5\_6\_7 do not have a trend as Bmsy is not estimated for these stocks. Stocks from EMU 2 are in black.

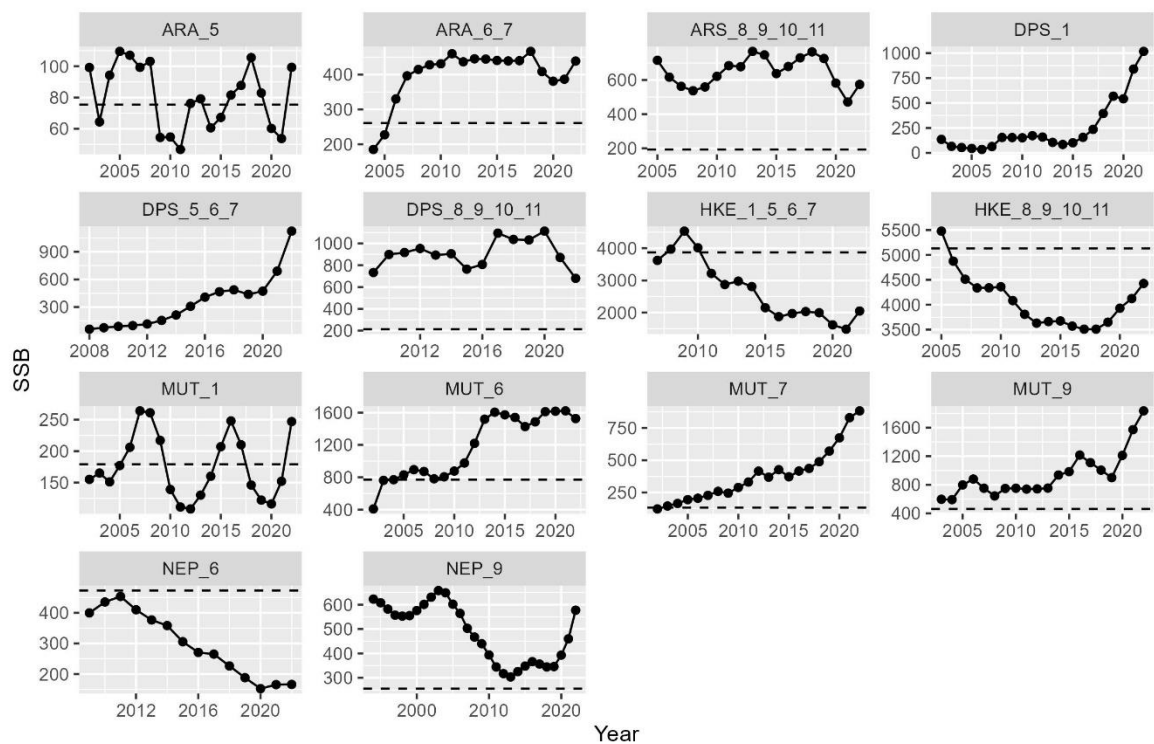


Figure 6.5.3. Trends of SSB per stock. The dashed black line represents the stock specific estimated Blim.

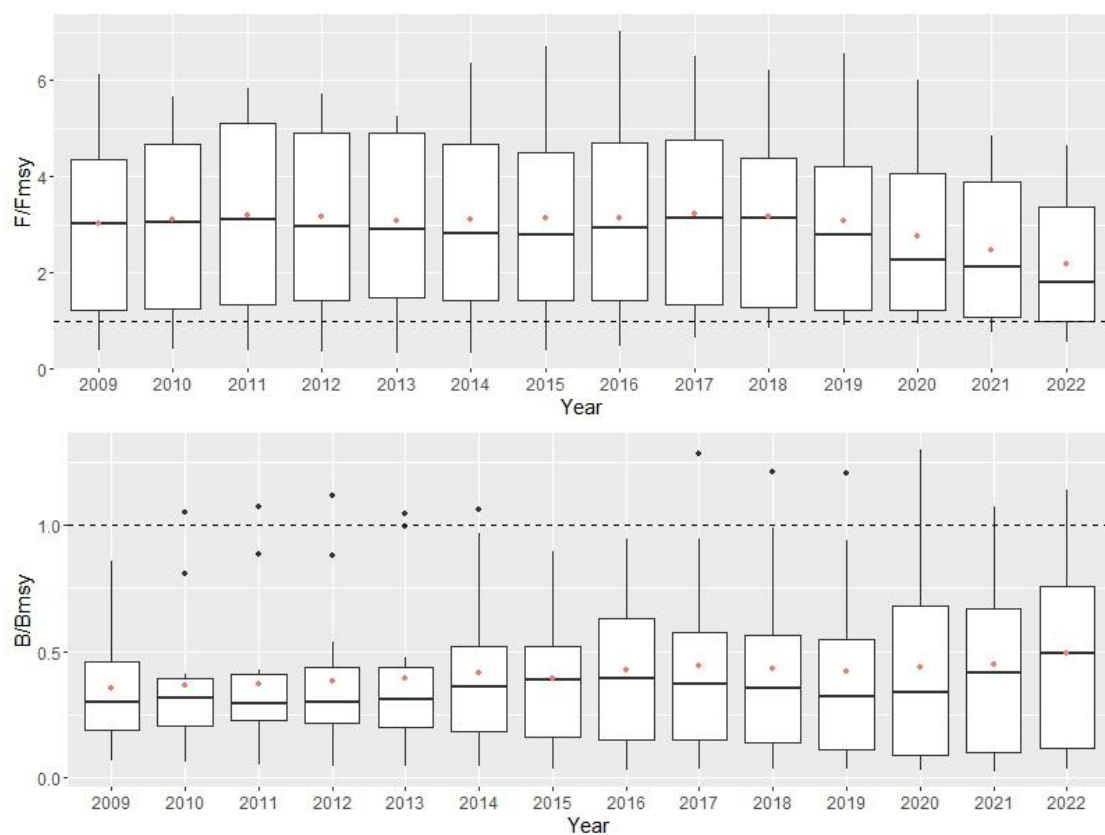




Figure 6.5.4. Summary statistics of  $F/F_{msy}$  and  $B/B_{msy}$  per year in the western Mediterranean. Pink dots represent arithmetic mean values, black horizontal lines represent the median, while lower and upper hinges are 25<sup>th</sup> and 75<sup>th</sup> percentiles. To summarize the period where data for all stocks is available, time series are cut since 2009.

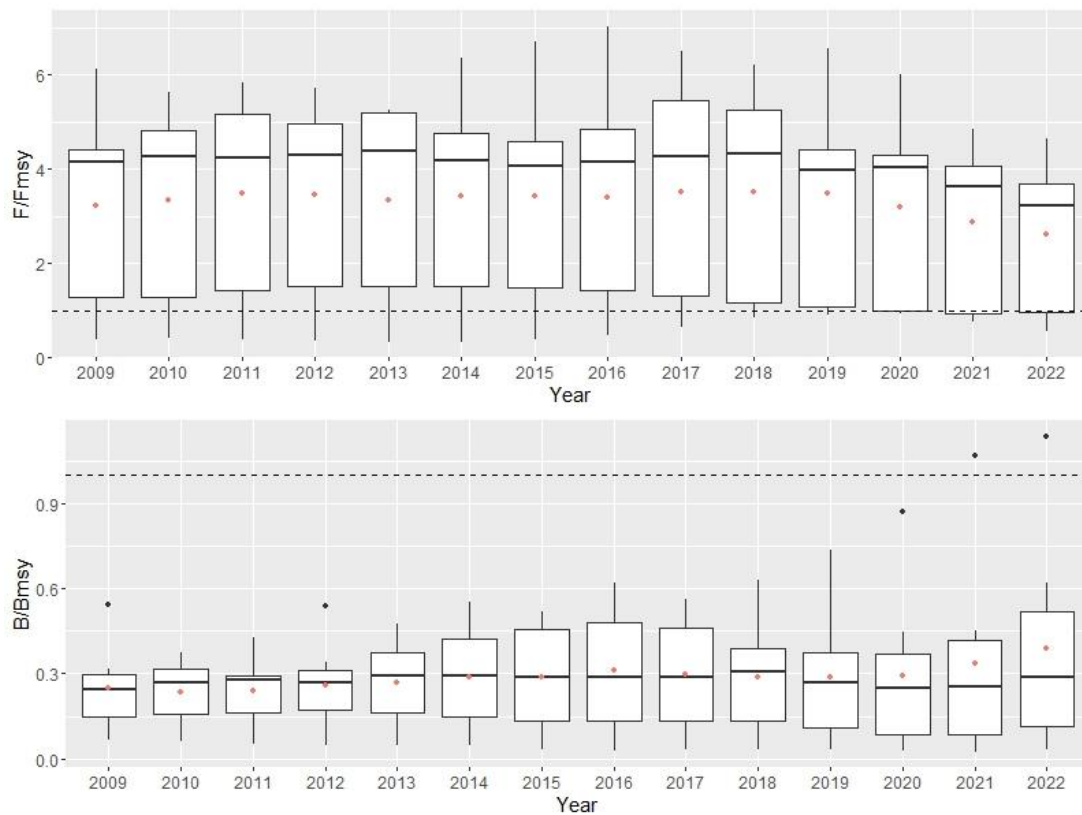


Figure 6.5.5. Summary statistics of  $F/F_{msy}$  and  $B/B_{msy}$  per year for stocks in EMU 1. Pink dots represent arithmetic mean values, black horizontal lines represent the median, while lower and upper hinges are 25<sup>th</sup> and 75<sup>th</sup> percentiles. To summarize the period where data for all stocks is available, time series are cut since 2009.

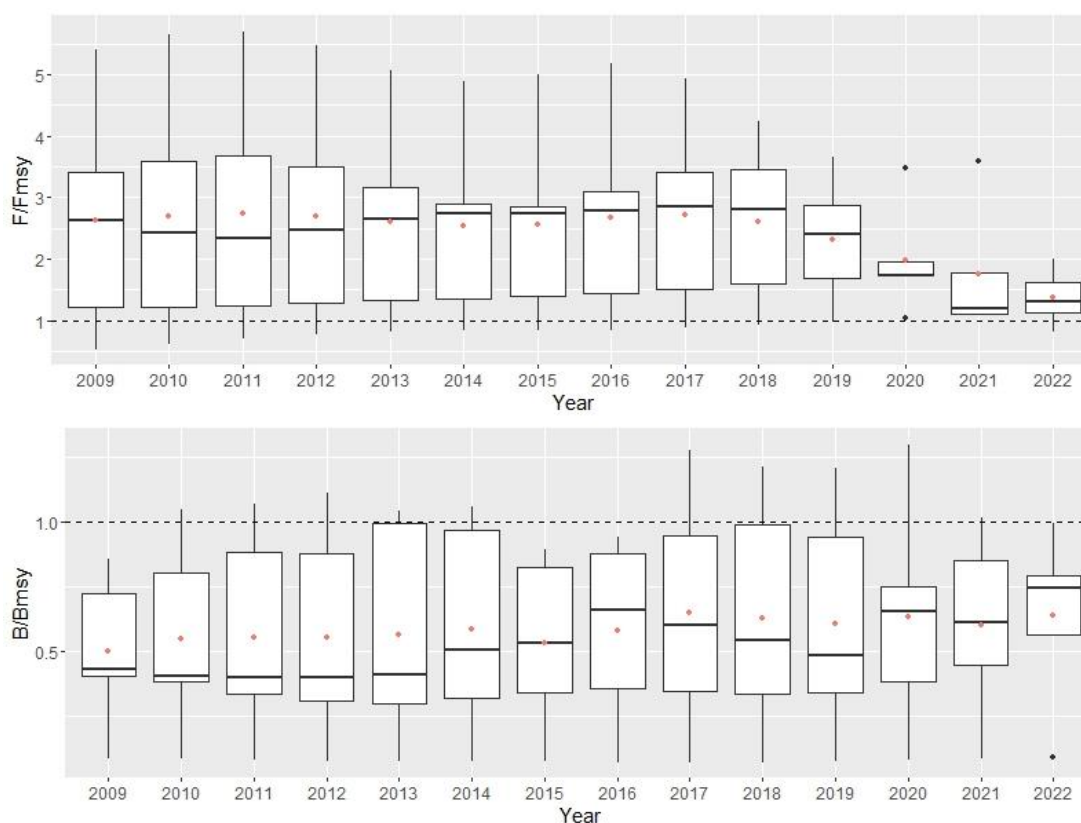


Figure 6.5.6. Summary statistics of  $F/F_{msy}$  and  $B/B_{msy}$  per year for stocks in EMU 2. Pink dots represent arithmetic mean values, black horizontal lines represent the median, while lower and upper hinges are 25<sup>th</sup> and 75<sup>th</sup> percentiles. To summarize the period where data for all stocks is available, time series are cut since 2009.

STECF observes that the trend of effort expressed in fishing days (Figure 6.5.7) shows an overall decrease in both EMUs. The decrease is stronger between the baseline and 2020 while slows up to 2022. The reduction of effort in 2020 compared to the baseline is ~14% in EMU 1 and ~30% in EMU 2. This higher reduction compared to the reduction imposed by Regulation (EU) 2019/1022 could be due to additional factors such as the COVID or bad weather conditions as reported in STECF EWG 21-13.

STECF observes that overall total catches (compared to values at the beginning of the time series) are decreasing for European hake stocks, NEP in GSA 6 and GSA 9 and MUT in GSA 9. Conversely, catches are increasing for DPS stocks and MUT in GSA 7 while no clear trends are observed for ARA in GSA 5, ARS, MUT in GSA 6 and NEP in GSA 5.

STECF observes that the stocks showing an  $F/F_{msy} < 1$  (DPS 1, DPS 5-6-7, MUT 7 and MUT 9) and a  $B/B_{msy} > 1$  (MUT 7 and MUT 9) were already show increasing trends of SSB prior to the implementation of Regulation (EU) 2019/1022 (2016-2019). Total catches for these stocks have been increasing since 2015 for DPS and since 2018 for MUT in GSA 7, while they have been decreasing for MUT in GSA 9 since 2016.

STECF observes that to evaluate the elimination, avoidance and reduction of unwanted catches, the most updated data by length per species and GSA are available in the report of STECF EWG 23-09.



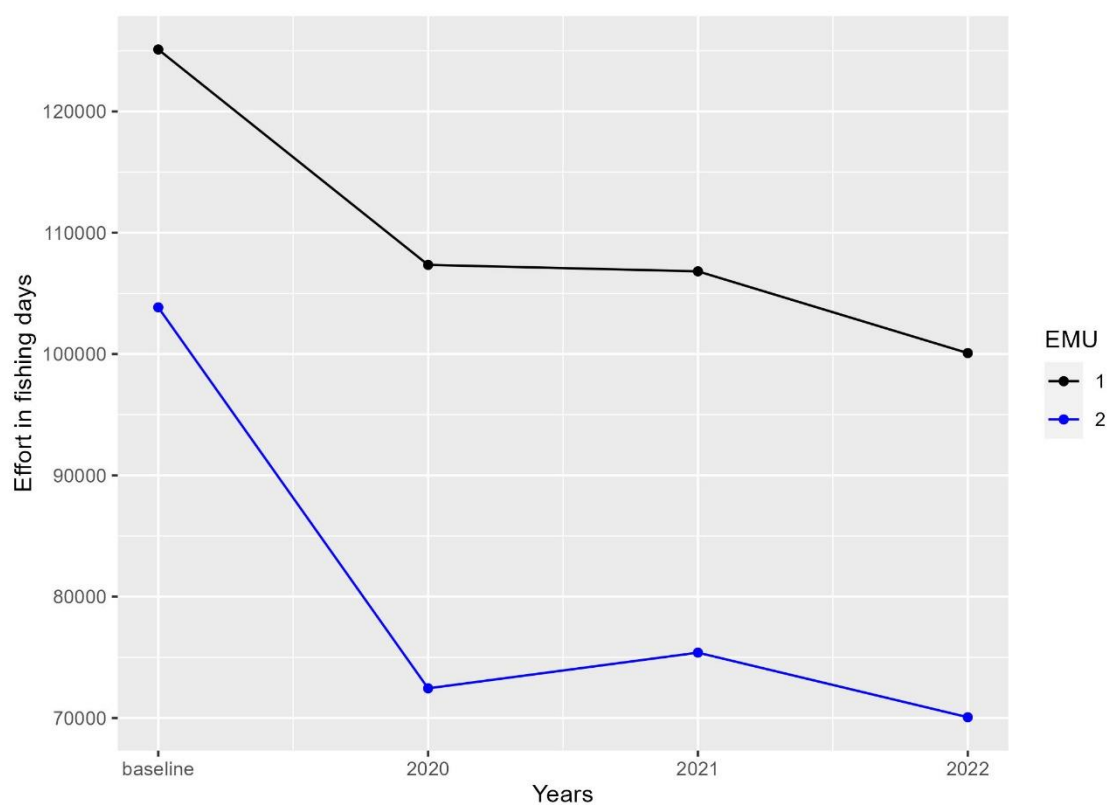


Figure 6.5.7. Trends of observed fishing days for trawling gears (source FDI data) by EMU. The baseline is the average across the period 2015-2017.

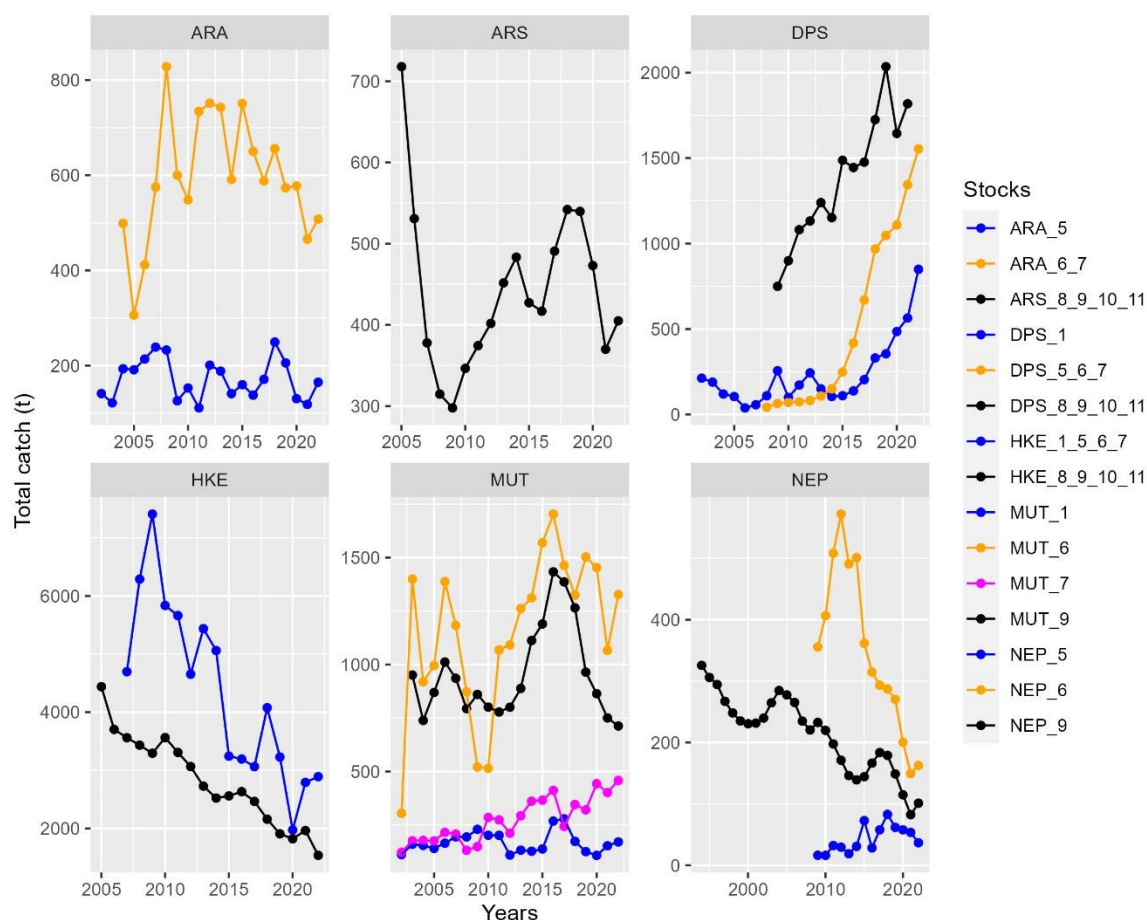


Figure 6.5.8. Trends of total catches by assessed stock. Stocks from EMU 2 are shown in black.

## STECF conclusions

STECF concludes that there is still a substantial level of overfishing of the stocks in the western Mediterranean across the two EMUs, according to the high levels of  $F/F_{msy}$  in 2022 (around 2). However, since 2019 the  $F/F_{msy}$  indicator shows a clear decreasing trend (both in the median as well as in the arithmetic mean).

STECF concludes that the reducing trend in  $F/F_{msy}$  does not result in a parallel increase in  $B/B_{msy}$ . Potentially, more time is needed to observe whether there will be an increase in biomass as a response to the reduction in fishing pressure resulting from the implementation of the West Med Map

STECF concludes that the decrease of  $F/F_{msy}$  is mainly driven by the trend in EMU2. However, it should be noted that two stocks (ARA 8-9-10-11 and MUT 10) included in Regulation (EU) 2019/1022 have not been covered by analytical assessments since 2021.

STECF concludes that three of the four stocks with  $F/F_{msy} \leq 1$  and/or  $B/B_{msy} \geq 1$  (DPS 1, MUT 7, MUT 9) show an increasing biomass coupled to a decreasing fishing mortality starting prior to the implementation of Regulation (EU) 2019/1022.

STECF concludes that the results presented in this study could be taken as evidence of the influence of Regulation (EU) 2019/1022 on relative biomass and the risk of overfishing. Despite the challenges of demonstrating influence of factors like the implementation of

Regulation (EU) 2019/1022, STECF nevertheless highlights reductions of the F/F<sub>msy</sub> indicator before and after the adoption of Regulation (EU) 2019/1022.

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## **6.6 Evaluation of the ad-hoc contract for the exploration of methodological approaches for the estimation of Fmsy ranges under the West Mediterranean EU MAP (Regulation EU 2019/1022)**

### **Background**

The Management Plan for the fisheries exploiting demersal stocks in the western Mediterranean Sea (Regulation (EU) 2019/1022)) will enter its full implementation phase on January 2025. In the Mediterranean Sea, Fmsy is set at F0.1 which is considered a precautionary Fmsy proxy and Fmsy ranges are based on quantitative linear models estimated in STECF EWG 15-09 and STECF EWG 15-18 (STECF, 2015 a & b). However, the precautionary nature of these Fmsy ranges has not been tested. DGMARE would like STECF to provide Fmsy ranges that fully comply with the standard definition outlined in Article 2(4)) of the multiannual plan which defines these as the fishing mortality levels which deliver no more than a 5 % reduction in long-term yield compared to the Maximum Sustainable Yield (MSY) while the probability of the stock falling below the limit reference point (Blim) is no more than 5%. To that purpose a dedicated term of reference has been established for expert working group STECF EWG 24-02 on Methodologies for Mediterranean stock assessments and the estimation of reference points (see ToR 7.4 in this report).

### **STECF comments**

STECF discussed the need and specifications for an ad-hoc contract to prepare the work on developing a methodology to deliver Fmsy or Fmsy proxy targets under the West Mediterranean EU MAP. This was tasked to STECF EWG 24-02 on Methodologies for Mediterranean stock assessments and the estimation of reference points (see ToR 7.4 of PLEN 24-01).

STECF acknowledges that the basis of setting Fmsy and Fmsy ranges is compliant with the definition outlined in Article 2(4)) of the West Med multiannual plan. It is conditional to achieve a good understanding of the stock-recruitment dynamics, which so far has been limited by the short-time series available from the assessments and/or by the limited range of observed biomass. STECF recalls that the criteria for defining Blim, upon which to assess the risks of putative Fmsy ranges, have been agreed previously by STECF EWG 22-03 and STECF EWG 22-09 (STECF 2022a, b).

STECF notes that the calculation of Fmsy ranges should be based on forward projections of the stocks, including sources of uncertainty (e.g., growth, recruitment, natural mortality, selectivity, assessment error, etc.) which are relatively easy to compute. According to the definition in Article 2, it will also be necessary to verify that the Fmsy ranges comply with the precautionary approach of maintaining the risk of falling below Blim less than 0.05. This could be part of the forward projections to estimate the Fmsy ranges, but at a later stage within a Management Strategy Evaluation (MSE) framework.

STECF notes that there are freely available tools such as EqSim (used by ICES), and other scripts and packages developed in FLR that may be suitable for this purpose. For the latter, the JRC has started to develop scripts that could be used by the EWG to calculate Fmsy ranges and can be customised to account for the specific features of the fish and shellfish stocks in the West Med MAP.

For the work to be carried out efficiently in time, STECF notes that it is important to design the methods, the sources of uncertainties and input errors in advance, as well as the time frame for the simulations. Furthermore, other alternative Fmsy proxies (like F40%SPR – Clark 1993) could be taken into consideration by the EWG for evaluation of their performance relative to current F0.1 or to actual Fmsy.

Given that any ad hoc contract would require detailed TORs with clear guidance on the required simulations to be carried out, which cannot be fully described before the EWG takes place, STECF considers that this ad hoc contract should not be launched at this stage. However, the possibility of an ad hoc contract to be launched after the STECF EWG 24-02 is not excluded if the work cannot be completed during the meeting.

STECF notes further time should be spent by STECF in considering the simulation framework under which the projections are to be carried out.

### **STECF conclusions**

STECF concludes that at this stage an ad hoc contract should not be launched in advance of EWG 24-02. However, the possibility of an ad hoc contract to be launched after the STECF EWG 24-02 in April should not be excluded if the work cannot be completed during the meeting.

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## **6.7 Review of the derogation for shore seines in certain territorial waters of France (paca and occitanie)**

### **Background provided by the Commission**

In accordance with Article 13(1) of Regulation (EC) No 1967/20065 (henceforth the Med Reg), the use of towed gears is prohibited within 3 nautical miles of the coast or within the 50 m isobath where that depth is reached at a shorter distance from the coast. At a request of a Member State, derogation from Article 13(1) may be granted, provided that the conditions set in Article 13(5) and (9) are fulfilled.

A general condition for all derogations is that the fishing activities concerned are regulated by a management plan in accordance with Article 19 of the Med Reg. According to paragraph 5 of Article 19, the measures to be included in the management plan shall be proportionate to the objectives, the targets and the expected time frame and shall consider:

- the conservation status of the stock or stocks.
- the biological characteristics of the stock or stocks.
- the characteristics of the fisheries in which the stocks are caught.
- the economic impact of the measures on the fisheries concerned.

Shore seine fishing is carried out from the shore in shallow depths and targets a variety of species (e.g. common Pandora, Mediterranean horse mackerel, European pilchard). This traditional fishery is in a phasing-out process, while 37 vessels were operating in 2014, there were only 17 in 2022. On 4 May 2022, France published a Ministerial Order reducing the maximum allowable effort from 1 386 to 638 days per year.

On 2 June 2014, the Commission adopted Implementing Regulation (EU) No 587/2014 (2) establishing for the first time a derogation from Article 13(1), first subparagraph of Council Regulation (EC) No 1967/2006 as regards the minimum distance from coast and depth for shore seines fishing in certain territorial waters of France (Languedoc-Roussillon and Provence-Alpes-Cote d’Azur).

This derogation was extended several times, including recently with the adoption of Commission Implementing Regulation (EU) 2022/2362 which expires on 25 August 2024. French authorities have expressed their wish to renew the derogation after that deadline.

### **Request to the STECF**

The STECF is requested to review the implementation report of the ‘shore seines’ fishery and the additional documents provided to support the French request to renew the derogation. The STECF is also requested to present its findings and make appropriate comments with respect to the conservation and management requirements/objectives stipulated by Council Regulation (EC) No 1967/2006 ("MedReg") and by the Regulation (EU) No 1380/2013.

More specifically, STECF is requested to advise and comment on whether the documents provided contain adequate and up-to date scientific and technical justifications ensuring that the conditions of the MedReg are still fulfilled, in particular that:

- There are particular geographical constraints, such as the limited size of the continental shelf along the entire coastline;
- The fishery has no significant impact on the marine environment;
- The fishery involves a limited number of vessels and does not contain any increase in the fishing effort with respect to what is already authorized by Member States;

- The fishery cannot be undertaken with another gear;
- The fishery is subject to a management plan and carry out a monitoring of catches as requested in Article 23;
- The vessels concerned have a track record of more than 5 years;
- The fishery does not interfere with the activities of vessels using gears other than trawls, seines or similar towed nets;
- The fishery is regulated in order to ensure that catches of species mentioned in Annex IX of Regulation (EU) 2019/1241 with the exception of mollusc bivalves, are minimal
- The fishery does not target cephalopods.
- The fisheries are highly selective and have a negligible effect on the marine environment; and
- The fisheries do not operate above seagrass beds of, in particular, *Posidonia oceanica* or other marine phanerogams

### Summary of the information provided to STECF

In total, four original documents (in French) were provided with machine-translated English versions:

1. 'Report from France to the European Commission on the follow-up to the derogation concerning beach seine fishing in the Mediterranean' - February 2024 (Ministry of Ecological Transition and Territorial Cohesion)
2. 'Request for derogation for beach seine (poutine) fishing in Alpes-Maritimes' (Departmental Committee for Maritime Fisheries and Marine Farming of Alpes-Maritimes)
3. 'Report from France to the European Commission on the follow-up to the derogation concerning beach seine fishing in the Mediterranean' – 23 June 2021 (Ministry of the Sea)
4. 'Additional information to Report from France to the European Commission on the follow-up to the derogation concerning beach seine fishing in the Mediterranean of 23 June 2021' - 29 October 2021 (Ministry of the Sea).

Document 1 provides a summary description of the beach seine fishery, data on catches and effort for the period 2021-2023. It presents information on the three main management measures which are contained in the current regulatory framework. These are:

- Limitations on the number of European fishing authorizations (EAF) with a view to reducing the fleet.
- Implementation of a national plan to control and monitor landings.
- Scientific monitoring of the fishery as well as its impact on the marine environment.

Document 2 presents information on the cultural and economic importance of the poutine (sardine fry) fishery and describes its characteristics as well as the actions taken by *prud'homies* (local fishermen collectives) to regulate the poutine fishery annually.

Documents 3 & 4 contain similar information to document 1 but cover the period 2018-2020. These two documents were previously submitted to PLEN 21-03 and PLEN 22-01.

### Description of the fishery

The fishery comprises two métiers:

- (a) 'poutine' beach seine, targeting sardine fry (2-mm mesh size) – 9 vessels with authorization in 2023.
- (b) 'classic' or 'non-poutine' beach seine, targeting a variety of coastal species (14-mm mesh size) – 8 vessels with authorization in 2023.

A management plan for the French beach seines has been in place since 2014 pursuant to Article 19 of Regulation (EC) No 1967/2006. The plan contains certain gear and fishing restrictions:

- Maximum net length 450 m, maximum drop of the net 10 m. No engine can be used to tow the net.
- The non-poutine seine fishery is open from 1 April to 30 November and for a maximum number of 150 fishing days per vessel.
- The poutine seine fishery is open from 1 February to 31 May only in waters adjacent to the Alps Maritimes and for vessels of  $\leq 12$  m. The maximum daily catch limit is set at 50 kg per day per vessel.
- An annual fishing effort ceiling is set which was reduced in 2022 from 1 386 to 638 days per year.

#### Issues related to the set 'Fleet quota'

The management plan prescribes that the fishing authorisations are linked to the vessels and are automatically withdrawn when the vessel holding the authorisation is replaced. Consequently, the number of authorized vessels has been reduced from 37 in 2014 to 17 in 2020-2023.

#### Fishing effort and catches

As summarised in table 6.7.1., the total number of fishing days was 136, 104 and 119 and the number of active vessels 3, 6 and 3 in 2021, 2022 and 2023, respectively. Total catches were 2955, 4457 and 3410 kg Fishing effort in 2023 (119 days) was 23% of the ceiling imposed in 2022 (638 days).

Table 6.7.1. summarizes the information on the number of vessels, fishing effort and total catches for the periods 2021-2023 (document 1) and 2018-2020 (document 4):

Table 6.7.1. Number of authorized vessels, active vessels, total effort and catches for the period 2018-2023.

<b>Year</b>	<b>Vessels with authorization</b>	<b>Active vessels</b>	<b>Days-at-sea</b>	<b>Total catch (kg)</b>
2018	Not available	12	235	8108
2019	18	8	195	5963
2020	17	4	136	2257
2021	17	3	136	2955
2022	17	6	104	4457
2023	17	3	119	3410

In document 1, the catch composition for the period 2021 – 2023 (reported in logbooks) is provided in the form of a pie-chart and with FAO species codes. To facilitate



interpretation, this information was reproduced by STECF in the form of the table below (Table 6.7.2), with species of Annex IX of the TMR indicated in bold:

Table 6.7.2. Catch composition for the period 2021 – 2023. Species of Annex IX are indicated in bold.

Species/species group	% contribution to catches (2021-2023)
Silversides (Atherinidae)	27
<b>Gilthead seabream (<i>Sparus aurata</i>)</b>	18
Mugilids ( <i>Mugil</i> spp)	13
Velvet swimcrab ( <i>Necora puber</i> )	13
<b>European sea bass (<i>Dicentrarchus labrax</i>)</b>	9
Freshwater siluroids (Siluroidei)	4
Common carp ( <i>Cyprinus carpio</i> )	3
<b>Atlantic horse mackerel (<i>Trachurus trachurus</i>)</b>	3
Garfish ( <i>Belone belone</i> )	2
Golden grey mullet ( <i>Liza aurata</i> )	2
Thicklip grey mullet ( <i>Chelon labrosus</i> )	1
<b>Sand steenbras (<i>Lithognathus mormyrus</i>)</b>	1
European eel ( <i>Anguilla anguilla</i> )	1
Atlantic gobies ( <i>Gobius</i> spp)	1
Total	98

In total, 35 species/species groups have been reported, with 21 species (including certain cephalopod species) contributing less than 1% to total catches. The first 5 species in Table 6.7.2. account for 80% of total catches. The main Annex IX species caught were *Sparus aurata* and *Dicentrarchus labrax*. The average catch per unit effort (CPUE) over the 2021-2023 period was 32 kg/vessel/day.

The table below (Table 6.7.3) is provided in document 1, shows the total landings of the “main species” in 2022 and 2023:

Table 6.7.3. Landings in 2022 and 2023.

Species	Landings 2022 (kg)	Landings 2023 (kg)
Silversides (Atherinidae)	2042	837
Gilthead seabream ( <i>Sparus aurata</i> )	1304	494
Mugilids ( <i>Mugil</i> spp)	488	942
European sea bass ( <i>Dicentrarchus labrax</i> )	329	416
Freshwater siluroids (Siluroidei)	209	19
Common carp ( <i>Cyprinus carpio</i> )	147	29
Garfish ( <i>Belone belone</i> )	117	140
Sand steenbras ( <i>Lithognathus mormyrus</i> )	130	0
Overall total	5428	3365

STECF notes that some discrepancies were found between the catches reported in Table 6.7.2 and the landings reported in Table 6.7.3. Total catches were reported as 4457 and 3410 kg and total landings 5428 and 3365 kg for 2022 and 2023, respectively.

### Control & surveillance outcomes

The outcomes (2022 and 2023) of the recent control & monitoring plan put in place since 2018 are provided in the report. This control & monitoring plan includes the following:

- The fisher shall keep a paper fishing logbook including for vessels of less than 10 meters and shall send a catch declaration and a landing declaration
- All beach seine fishing activities must be reported at least 24 hours in advance
- Verification for 100 % of the fleet of compliance with the ceiling of days at sea
- Physical verification for 100 % of the fleet of compliance of fishing gear
- Monitoring of reporting obligations

Out of 9 inspections carried out in 2022 and 5 inspections in 2023, only 1 violation was noticed (in 2023). It is stated that the control objectives were not fully met, due to the low number of trips at sea, but the control of the fleet will continue and improve in 2024.

### Scientific monitoring of the activity as well as its impact on the marine environment

The only information provided are logbook data on effort and catches/CPUEs and landings (summarised above). No data from on-site scientific sampling is reported.

The French authorities justify the lack of scientific sampling in that the fishery is of low importance in terms of number of vessels involved, catch volumes and potential effects on sensitive habitats, and is being a phased-out.

With regards to the effects on sensitive habitats, it is mentioned that the gears are light (hauled by hand, no otter boards) and operated over soft, relatively flat bottoms without rocks or other obstacles. It is also stated that the fishery is not carried out above sensitive habitats. With regards to the poutine fishery, maps of marine habitats are presented (in both documents 1 and 2), showing that the coast of Antibes in Nice (said to be the area of activity of the poutine fleet) is dominated by sandy bottoms.

A specific reference is made to the experimental geolocation program RECOPECA; French authorities claim that data obtained from a sample of vessels showed that the beach seine fishing activity is not performed above habitats protected by Article 4 of Regulation (EC) No 1967/2006. However, no specific outcomes of this project have been made available to STECF (e.g., fishing footprint maps overlayed over sensitive habitats).

### Socio-economic considerations

STECF notes that fishers on the French Mediterranean coasts are assembled in old and original collectives called *prud'homies* and follow the rules of the collectives. According to the information provided in document 2, each year the fishers adopt an inter-*prud'homie* regulation for the poutine fishery laying down the fishing rules for the current season (fishing period, quantity allowed to be taken, arrangements for valuing catches such as the selling price). The minimum selling price of catches is set at EUR 25/kg. It is stated that considering this minimum selling price and 10 kg per day over a 40-day fishing period, the turnover for each vessel owner involved in the fishery is at least EUR 10000.

## **STECF comments**

STECF notes that the plan is supported by limited information on the biological characteristics and state of the resources, size composition of catches, magnitude of discards, fishing footprint (to evaluate if fishing activity is practiced above sensitive habitats), information on the social and economic impact of the measures proposed.

STECF notes that, in the management plan, a CPUE threshold of 14.73 kg/trip for salema (*Sarpa salpa*) has been proposed as a reference (trigger) point to enact measures to reduce

fishing effort. However, no data supporting the monitoring of this CPUE indicator has been provided. According to the information presented in document 1 (p. 13), the mean 2021-2023 CPUE for salema (FAO code: SLM) was 0.018 kg/trip.

STECF considers that ideally the management plan should separate the two métiers (poutine and non-poutine seine), including in the analysis of catches and landings data. The poutine has a 2-mm mesh and targets sardine fry, so its catch composition is expected to be quite different from the traditional métier with a 14-mm mesh which targets a variety of coastal species. In the combined catch data reported in Table 6.7.2, (document 1, page 13) sardine accounts for less than 1% of total beach seine catches. Given that the poutine fishery targets sardine fry, STECF notes that an explanation should be provided for the low sardine catches reported in 2021-2023.

STECF notes that in the catch data reported for 2018 (documents 3 and 4), 93% of the species landed were Annex IX species [e.g., common pandora (33%), horse mackerel (23%), sardine (14%)]. The catch and landings compositions reported for 2022-2023 is markedly different, with, for example, negligible catches of common pandora and sardine.

Conditions set by the MEDREG and Regulation (EU) 2019/1241

<b>Condition</b>	<b>STECF response</b>
There are particular geographical constraints, such as the limited size of the continental shelf along the entire coastline	By its nature, the beach seine fishery involves the towing of the net from the beach by hand, so it can only be carried out in very shallow waters.
The fishery has no significant impact on the marine environment	<p>STECF reiterates its conclusion from STECF PLEN 21-03 that given the lack of relevant data on:</p> <ul style="list-style-type: none"> <li>- mortality rates/biomass for the target species,</li> <li>- magnitude of discards</li> <li>- size composition of catches</li> <li>- fishing footprint</li> <li>- the impact on the environment cannot be assessed.</li> </ul> <p>Nevertheless, STECF acknowledges that fishing effort and catches have been decreasing together with the diminishing number of boats, and this implies a corresponding reduction of any potential negative impacts of the fishery on the ecosystem and the resources.</p>
The fishery involves a limited number of vessels and does not contain any increase in the fishing effort with respect to what is already authorized by Member States	The management plan in place prescribes that the fishing authorisations are linked to the vessels and are automatically withdrawn when the vessel holding the authorisation is replaced. Consequently, the number of authorized vessels has been reduced from 37 in 2014 to 17 in 2020-2023, with only 3 vessels actually active in 2023; effort has also decreased significantly along the years and only 23% of the quota (638 fishing days) set in 2022 has been utilized in 2023.

The fishery cannot be undertaken with another gear	The poutine seine fishery targeting sardine fries cannot be undertaken with another gear in Alpes-Maritimes. For "non-poutine" seine fishing no evidence is provided that this fishery cannot be undertaken with other gears (e.g., gears that do not require any derogation).
The fishery is subject to a management plan and carry out a monitoring of catches as requested in Article 23	There is management plan in place since 2014. The only catch data collected are those filled in the logbooks by the skippers. A justification has been provided by the French authorities on why the fishery is not a priority in their data collection scheme.
The vessels concerned have a track record of more than 5 years	According to documents 1 and 3, the same individual vessels have been authorized in 2020 and 2023. Considering the characteristics of the fishery, it seems clear that the fishery is only operated by vessels having a track record in the fishery.
The fishery does not interfere with the activities of vessels using gears other than trawls, seines or similar towed nets	The fishery operates in a very narrow zone next to the coastline and it is very likely that there is no interaction with other fisheries.
The fishery is regulated in order to ensure that catches of species mentioned in Annex IX of Regulation (EU) 2019/1241 with the exception of mollusc bivalves, are minimal	According to the information provided for 2021-2023 (Table 6.7.2) species listed in Annex IX of Regulation (EU) 2019/1241 account for about one third of total catches. Among them, the sea bream and sea bass seem to be targeted. No information is provided on what proportion is below MCRS.
The fishery does not target cephalopods	According to the information provided, cephalopods account for less than 2% of the catches, so the fishery does not target cephalopods.
The fisheries are highly selective and have a negligible effect on the marine environment	The beach seine fishery is multi-specific. No data on the level of discards or size composition of catches are given to assess if the fishery can be considered selective or not.
The fisheries do not operate above seagrass beds of, in particular, <i>Posidonia oceanica</i> or other marine phanerogams	STECF is unable to evaluate whether the fisheries operate above seagrass beds. No maps of fishing footprint in relation to sensitive habitats have been provided.

## STECF conclusions

STECF acknowledges the effort made by France to provide additional information for assessing the request for prolonging the derogation to the Mediterranean Regulation granted to the beach seines fishery in PACA and Occitanie.

Reiterating the previous evaluations from STECF PLEN 18-02 and STECF PLEN 21-03, based on the information available, STECF cannot fully assess as such whether the French

management plan satisfies the conservation and management requirements/objectives stipulated by Council Regulation (EC) No 1967/2006 and by the Regulation (EU) No 1380/2013. However, STECF concludes that as the fishery is being phased out rapidly, with only very few active vessels left, the impact of the fisheries accordingly is likely to be minimal and decreasing.

## 6.8 Management plan for mechanised dredges in Andalusia, Spain

### Background provided by the Commission

Under Article 19 of Council Regulation (EC) No 1967/20061 (hereafter "MEDREG"), Member States are expected to adopt management plans for fisheries conducted by trawl nets, boats seines, shore seines, surrounding nets and dredges within their territorial waters.

In 2013, the Common Fisheries Policy (CFP) introduced new elements for conservation such as the target of maximum sustainable yield (MSY) for all the stocks by 2020 at the latest, the landing obligation and the regionalisation approach.

In line with these two regulations, the plans shall be based on scientific, technical and economic advice, and shall contain conservation measures to restore and maintain fish stocks above levels capable of producing MSY. Where targets relating to the MSY (e.g. fishing mortality) cannot be determined, owing to insufficient data, the plans shall provide for measures based on the precautionary approach, ensuring at least a comparable degree of conservation of the relevant stocks.

The plans may contain specific conservation objectives and measures based on the ecosystem approach to achieve the objectives set. In particular, it may incorporate any measure included in the following list to limit fishing mortality and the environmental impact of fishing activities: limiting catches, fixing the number and type of fishing vessels authorized to fish, limiting fishing effort, adopting technical measures (structure of fishing gears, fishing practices, areas/period of fishing restriction, minimum size, reduction of impact of fishing activities on marine ecosystems and non-target species), establishing incentives to promote more selective fishing, conduct pilot projects on alternative types of fishing management techniques. The last management plan (MP) for mechanised dredges fishing off the Mediterranean coast of Andalusia was implemented in 2019 and was in force until 31 December 2023. STECF has previously reviewed earlier versions of the MP in 2010 (STECF PLEN 10-03), 2013 (STECF PLEN-13-03), 2017 (PLEN 17-01) and 2019 (STECF PLEN 19-03).

### Request to the STECF

**TOR 1.** Assess whether the management plan contains adequate elements in terms of:

1.1. The description of the fisheries:

- Recent and historical data on catches (landings and discards) of the species concerned, fishing effort and abundance indices such as catch-per-unit-effort;
- Data on length-frequency distribution of the catches, with particular reference to the species subject to minimum sizes in accordance with Annex IX of Regulation (EU) No 2019/1241;
- An updated state of the exploited resources; and
- Information on economic indicators, including the profitability of the fisheries.

1.2. Objectives, safeguards and conservation/technical measures:

- Objectives consistent with Article 2 of the CFP and quantifiable targets, such as fishing mortality rates and total biomass;
- Measures proportionate to the objectives, the targets and the expected time frame. In particular, advice whether the proposal in terms of total annual catches would ensure a sustainable exploitation of the target stocks (i.e. *Donax trunculus*, *Callista chione*, *Acanthocardia tuberculata* and *Chamelea gallina*);

- Safeguards to ensure that quantifiable targets are met, as well as remedial actions, where needed, including situations where the poor quality of data or non-availability places the sustainability of the main stocks of the fishery at risk; and
- Other conservation measures, in particular measures to fully monitor catches of the target species, to eliminate discards and to minimise the negative impact of fishing on the ecosystem.

### 1.3. Other aspects:

- Quantifiable indicators for periodic monitoring and assessment of progress in achieving the objectives of the plan.
- If deemed necessary, provide any recommendations and guidance on how to obtain improved scientific/technical supporting material for the plan. This could be done in terms of collection of data, evaluation of the status of the target stocks, evaluation of conservation measures, impact on the marine ecosystem and monitoring programme.

## Summary of the information provided to STECF

### Summary of previous evaluations of the Management Plans

The most recent Management Plan (MP) governing mechanised dredge fishing along the Mediterranean coast of Andalusia was implemented in 2020 and remained in force until 31 December 2023. STECF conducted reviews of previous versions of this MP in 2010 (PLEN 10-03), 2013 (PLEN-13-03), 2017 (PLEN 17-01), and 2019 (PLEN 19-03).

STECF 19-03 concluded that the revised MP represented an improvement on previous versions through the incorporation of new elements supported by scientific data. These elements included estimates of biomass using fisheries-independent methodologies and more detailed information on effort allocation and discards, which were deemed crucial for effective fishery management by STECF previously.

Regarding *Acanthocardia tuberculata*, *Callista chione*, and *Donax trunculus*, STECF 19-03 found that these stocks appeared to be exploited at or below sustainable levels, with stable or increasing biomass. Although in recent years' TACs were not restrictive, the CPUE limits proposed in the new MP aligned with the outcomes of the latest stock assessments. The adjustments in catch limits and CPUE thresholds suggested in the new MP were regarded as modest and consistent with the current stock status and recent resource trends in the region.

However, for *Chamelea gallina*, STECF 19-03 expressed concerns about the proposed increase in TAC, mentioning insufficient robustness in the underlying assessment. Indeed, conflicting signals regarding the stock's status in relation to the MSY objective were noted, with both available assessment models indicating declining trends in biomass and CPUEs and increasing trends in fishing mortality. Considering this, STECF 19-03 recommended further analyses to enhance the assessment's robustness, emphasising the need for ongoing monitoring of abundance through CPUEs analyses and fisheries-independent surveys.

### Information provided regarding the new Management Plan

The new MP provided to STECF provides additional information that aids in addressing some of the information gaps identified in previous evaluations of the Plan (STECF PLEN 10-03, STECF PLEN 13-03, STECF PLEN 17-01, and STECF PLEN 19-03). Moreover, the MP introduces amendments based on both existing information and recent scientific evidence.

A comprehensive evaluation and monitoring report on the control plan for mechanised dredge fisheries along the Mediterranean coast of Andalusia was also provided. This report was collaboratively prepared by the Spanish Institute of Oceanography, Malaga

Oceanographic Centre (IEO); the Agency for the management of agriculture and fisheries of Andalusia (AGAPA); and the Directorate-General for Fisheries and Aquaculture (DGPA). The objective of the MP is to assess compliance with the biological and conservation reference points outlined in the plan.

Additionally, the MAP presents a detailed account of the scientific monitoring of the fisheries conducted between 2019 and 2023, along with proposals for extending and amending the management plan.

### STECF comments

#### TOR 1.1 - The description of the fisheries:

- Recent and historical data on catches (landings and discards) of the species concerned, fishing effort and abundance indices such as catch-per-unit-effort

The new MP includes historical data on catches and CPUE by species (2001-2022). New abundance indices derived from surveys at sea for the evaluation of stocks size (fishery independent source) are also presented.

The updated MP incorporates recent data on catches and CPUE by species for the period 2019-2023 (Tables 6.8.1- 6.8.3). Catch data and CPUE come from the IDAPES, which is the Andalusian information system on fishery commercialisation and production data of the General Directorate of Fisheries and Aquaculture of the Andalusian Regional Government. Additional CPUE data has been obtained through a programme of observers' onboard dredge vessels.

The stock of *A. tuberculata* was not exploited in the period 2021-2023 due to the presence of Paralytic Shellfish Poisoning (PSP) toxins.

Table 6.8.1. Total catches by annual fishing season (tons) (source: IDAPES)

Species	2019-20	2020-21	2021-22	2022-23	Annual TAC
<i>Donax trunculus</i>	25.23	26.21	21.50	35.66	36
<i>Callista chione</i>	251.05	173.03	155.15	54.99	216
<i>Acanthocardia tuberculata</i>	382.41	1,092.85	0	0	1,450
<i>Chamelea gallina</i>	26.28	30.22	22.48	21.33	25

Table 6.8.2. Average CPUE by annual fishing season (kg/vessel/day) (source: IDAPES)

Species	2019-20	2020-21	2021-22	2022-23	Annual threshold
<i>Donax trunculus</i>	16.3	16.9	14.6	15.8	17.5
<i>Callista chione</i>	95.3	77.6	68.0	43.4	92.0
<i>Acanthocardia tuberculata</i>	780.4	528.4	-	-	341.0
<i>Chamelea gallina</i>	39.8	33.1	24.7	20.2	23.6

Table 6.8.3. Average CPUE by annual fishing season (kg/vessel/day) (source: Observers onboard)

Species	2019-20	2020-21	2021-22	2022-23	Annual threshold
<i>Donax trunculus</i>	24.2	30.4	32.8	-	17.5
<i>Callista chione</i>	90.8	55.5	52.6	63.7	92.0
<i>Acanthocardia tuberculata</i>	-	660.8	-	-	341.0
<i>Chamelea gallina</i>	51.3	-	-	-	23.6

Information concerning the fishing activity undertaken by fleets targeting *C. gallina*, *C. chione* and *D. trunculus* is also provided for the period 2018-2023. These figures are sourced from both IDAPES and the Andalusian Fisheries Tracing and Monitoring System (SL SEPA) (Tables 6.8.4-6.8.6).



Table 6.8.4. Information on the fishing activities with mechanised dredges targeting *Chamelea gallina* in the Andalusian Mediterranean Sea.

	2018-2019		2019-2020		2020-2021		2021-2022		2022-2023	
	IDAPE S	SLSEP A	IDAPE S	SLSEP A	IDAPE S	SLSEP A	IDAPE S	SLSEP A	IDAPE S	SLSEP A
Total vessels	75	40	44	13	61	9	53	16	67	48
Total number of fishing trips	1,187	575	690	184	956	70	1,020	220	1,181	561
Fishing trips/vessel	16	14	16	14	16	8	19	14	18	12
Effort (hour/trip)	—	5.1	—	2.6	—	3.2	—	3.6	—	3.4
CPUE (kg/hour)	—	7.3	—	15.3	—	7.9	—	4.6	—	5.3
Vessel yield (kg/trip)	36.9	37.7		40.4	31.6	25.4	22.0	16.4	18.1	18.1

Table 6.8.5. Information on the fishing activities with mechanised dredges targeting *Callista chione* in the Andalusian Mediterranean Sea.

	2018-2019		2019-2020		2020-2021		2021-2022		2022-2023	
	IDAPE S	SLSEP A	IDAPE S	SLSEP A	IDAPE S	SLSEP A	IDAPE S	SLSEP A	IDAPE S	SLSEP A
Total vessels	73	27	63	27	90	25	73	25	57	45
Total number of fishing trips	2,213	715	2,667	852	2,450	742	2,430	934	1,364	864
Fishing trips/vessel	198.2	65.3	251.0	70.7	173.0	61.2	155.1	65.0	54.9	32.3
Effort (hour/trip)	30	26	42	32	27	30	33	37	24	19
CPUE (kg/hour)	—	3.6	—	3.5	—	4	—	4.1	—	3.9
Vessel yield (kg/trip)	—	25.4	—	23.8	—	20.7	—	16.9	—	9.6

Table 6.8.6. Information on the fishing activities with mechanised dredges targeting *Donax trunculus* in the Andalusian Mediterranean Sea.

	2018-2019		2019-2020		2020-2021		2021-2022		2022-2023	
	IDAPE S	SLSEP A	IDAPE S	SLSEP A	IDAPE S	SLSEP A	IDAPE S	SLSEP A	IDAPE S	SLSEP A
Total vessels	69	28	65	29	59	12	52	28	57	43
Total number of fishing trips	1,378	559	1,561	519	1,547	159	1,451	616	2,336	1,009
Fishing trips/vessel	27.2	12.0	25.2	7.5	26.2	2.0	21.5	9.3	35.6	14.8

Effort (hour/trip)	20	20	24	18	26	13	28	22	41	23
CPUE (kg/hour)	—	2.7	—	2.5	—	1.9	—	2.3	—	2.6
Vessel yield (kg/trip)	—	8.1	—	5.8	—	6.5	—	6.5	—	5.7

STECF PLEN 19-03 observed that the overall fishing effort has not exhibited any notable changes since 2000. However, in this instance, as no historical data on fishing effort has been provided, STECF PLEN 24-01 is unable to assess this aspect. STECF notes that the tracking system SLSEPA does not represent the complete activity of the fleet.

- *Data on length-frequency distribution of the catches with particular reference to the species subject to minimum sizes in accordance with Annex IX of Regulation (EU) No 2019/1241*

Among the four species of bivalve accounted in the MP, only *C. gallina* is included in Annex IX of Regulation (EU) No 2019/1241. However, length-frequency distribution of the catches have been provided for all the four species. *C. chione*, *A. tuberculata* and *D. trunculus* have a Minimum Conservation Reference Size (MCRS) defined at national level (60mm, 45 mm and 25 mm, respectively).

A detailed description of the landing fractions, size distribution of the retained and discarded fraction per month and by fishing area for the 4 most relevant species targeted by the mechanised dredges is included.

An analysis of the evolution in mean size of the population structure over time is provided. In general, no noticeable changes in the size structure of the populations have occurred, at least within the period 2019-2023 for which information is available.

- *An updated state of the exploited resources*

The state of the stocks exploited was assessed through two production models (ASPIC and BioDyn) using the averages of the daily CPUE per vessel and target species (kg/day) in the period 2001-2022. Prior to the use of the production models, the CPUE have been standardised using GLMs according to year, gross registered tonnage (GRT), engine power (HP) and vessel length (LOA).

The MP includes an updated analysis of the state of the exploited resources.  $B/B_{msy}$  and  $F/F_{msy}$  are used as indicators of status of stocks and for showing the evolution of the stocks status over time.

Table 6.8.7 shows the outcomes of the stock assessments performed through the two methods.

- *A. tuberculata*, both methods indicate that the stock is in good condition, with  $B > B_{msy}$  and  $F < F_{msy}$ .
- *C. gallina*, both methods indicate  $B < B_{msy}$ , with only ASPIC showing  $F < F_{msy}$ . Regarding *D. trunculus*, the two methods show completely contrasting results, with ASPIC indicating  $B < B_{msy}$  and  $F > F_{msy}$ , while BioDyn suggests  $B > B_{msy}$  and  $F < F_{msy}$ .
- *C. chione*, both methods indicate  $F < F_{msy}$ , but ASPIC shows  $B < B_{msy}$  while BioDyn suggests  $B > B_{msy}$ .

The CPUE trends from 2001 to 2022 show relatively stable patterns over time for *C. gallina* and *D. trunculus*. Conversely, *A. tuberculata* exhibits an increasing trend, while *C. chione* demonstrates a decreasing trend.

Table 6.8.7. Results of stock assessments performed with ASPIC and BioDyn for the four species of bivalves.

Species	B/B <sub>msy</sub>	F/F <sub>msy</sub>	method	CPUE trend
<i>A. tuberculata</i>	1.44	0.26	ASPIC	Increasing
	1.66	0.16	BioDyn	
<i>C. gallina</i>	0.86	0.85	ASPIC	Stable
	0.35	1.58	BioDyn	
<i>D. trunculus</i>	0.34	2.10	ASPIC	Stable
	1.24	0.90	BioDyn	
<i>C. chione</i>	1.22	0.26	ASPIC	Decreasing
	0.46	0.56	BioDyn	

- *Information on economic indicators, including the profitability of the fisheries.*

In 2020, the Andalusian Agricultural and Fisheries Management Agency conducted a socio-economic study on fishing for bivalve molluscs using mechanised dredges along the Andalusian Mediterranean coast. The study surveyed 223 individuals involved in shellfish harvesting between August and September 2019. Concerning the profitability of the fishery, results revealed that 5.5% of respondents engaged in additional activities to supplement their income. The study analysed costs, income, and gains, showing an average monthly gain of EUR 824, with most respondents reporting gains between EUR 600 and EUR 1,000 per month. Only 9.5% of respondents expressed satisfaction with an average gain exceeding EUR 1,000.

*TOR 1.2 - Objectives, safeguards and conservation/technical measures:*

- *Objectives consistent with Article 2 of the CFP and quantifiable targets, such as fishing mortality rates and total biomass*

The objectives of the MP are established to regulate the fishery for sustainable yields. Relative values for current fishing mortality and current biomass in relation to the level corresponding to MSY are calculated ( $F/F_{msy}$  and  $B/B_{msy}$ ) and serve as indicators of the exploitation level and biomass status.

TACs have historically been set using production models. However, in recent years, a new dredge survey has been conducted, allowing for a comparison of estimates of exploitable biomass and abundance at sea with those from production models. Table 6.8.8 presents MSY and  $B_{msy}$  estimates from the latest assessment conducted in 2023 using data from 2001-2022. Proposed changes in the latest MP are informed by these recent results.

Table 6.8.8. Relative values for biomass and fishing mortality related to the level corresponding to  $B/B_{msy}$  and MSY.

Species	B <sub>msy</sub> tons	MSY tons	method
<i>A. tuberculata</i>	7,060	984	ASPIC
	5,469	1,367	BioDyn
<i>C. gallina</i>	164	24	ASPIC
	109	32	BioDyn
<i>D. trunculus</i>	20	28	ASPIC
	199	26	BioDyn
<i>C. chione</i>	967	174	ASPIC
	840	211	BioDyn

TACs have been established for each of the four bivalves targeted by the fishery, with CPUE thresholds used to indicate acceptable levels of biomass, triggering management actions. These measures, outlined in previous MPs, include halting fishing activity upon reaching

catch limits (TACs) or reducing effort when minimum CPUEs are not met. Effort reductions are ratified only after confirming that decreased catch rates result from actual biomass reduction rather than other factors like market constraints. STECF observes that this option was already present in the 2019 version of the MP.

Changes in environmental conditions affecting abundance are neither known nor predictable and are not factored into considerations. STECF raises a general concern regarding the use of CPUE thresholds, noting that CPUEs may not consistently serve as a reliable indicator of abundance. Fluctuations over time in CPUEs may lead to overly optimistic assessments of stock status, posing risks of hyperstability.

*- Measures proportionate to the objectives, the targets and the expected time frame. In particular, advice whether the proposal in terms of total annual catches would ensure a sustainable exploitation of the target stocks (i.e. Donax trunculus, Callista chione, Acanthocardia tuberculata and Chamelea gallina)*

The evaluations of stock status and trends enable the assessment of whether the management measures are aligned with the objectives, ensuring the attainment of measurable targets and facilitating corrective actions as necessary. Utilising these evaluations, projections are made to estimate the time frames required for stock recovery to sustainable levels. STECF finds that the TACs and minimum CPUE thresholds are sustainable for three (i.e., *D. trunculus*, *C. chione*, *A. tuberculata*) out of four species, indicating that the measures required to maintain stocks at sustainable levels in accordance with defined reference points seem reasonable in these instances (Table 6.8.9).

Table 6.8.9. TACs (tonnes) and minimum CPUE thresholds (kg/vessel/day) included in the previous MP and proposed in the new MP for the four bivalves targeted by mechanised dredges in the Andalusian Mediterranean Sea.

Species	Previous MP		New proposal	
	TAC	CPUE	TAC	CPUE
<i>Donax trunculus</i>	36	17.5	25	15.4
<i>Callista chione</i>	216	92.0	174	90.0
<i>Acanthocardia tuberculata</i>	1,450	341.0	1,365	373.0
<i>Chamelea gallina</i>	25	23.6	25	23.4

The primary concern pertains to *C. gallina*, where the MP suggests maintaining TAC and CPUEs at the same level as the previous MP. However, STECF argues that this updated proposal lacks precautionary measures because stock assessments indicate that this stock is not in good health. Both assessments indicate  $B < B_{msy}$ , and BioDyn also indicates  $F > F_{msy}$ .

*- Safeguards to ensure that quantifiable targets are met, as well as remedial actions, where needed, including situations where the poor quality of data or non-availability places the sustainability of the main stocks of the fishery at risk*

Upon reaching 90% of the TAC, the Directorate-General for Fisheries and Aquaculture will institute a precautionary closure of the relevant fishery until the actual total catches are verified. The MP stipulates that if TACs are surpassed, the fishery for the respective species will be closed.

In addition, the MP states that should the minimum annual average threshold of CPUE not be reached for the specified species, a thorough analysis of the data and fishery status will be conducted to identify the underlying causes. If this situation is attributed to a decline in exploitable stocks, regardless of the cause, the fishing schedule will be reduced from 5 to 4 days per week for that species in the following year. If this adjustment proves insufficient to surpass the minimum annual CPUE threshold, the fishery will be closed until scientific monitoring results offer adequate technical assurances to resume fishing activities.

Annually, the Regional Ministry overseeing fisheries and shellfish fisheries will review scientific reports evaluating and monitoring the fishery. Based on these findings, the Ministry will determine, through amendments to this MP, whether additional measures are necessary to regulate and oversee fishing activity. These measures may include adjustments to total annual catch limits, minimum catch thresholds, percentages of effort reduction, and the duration required to achieve these reduction objectives.

Regarding the catches from recent years compared with the defined TACs, in general, catches have been much lower than the TACs for all the species (Table 6.8.1), STECF notes that the TACs are not restrictive to the fishery in most of the cases and did not contribute to regulate it.

STECF observes that the safeguards and remedial actions outlined in the MP are adequate to ensure the achievement of quantifiable targets.

*- Other conservation measures, in particular measures to fully monitor catches of the target species, to eliminate discards and to minimise the negative impact of fishing on the ecosystem.*

The new MP includes provisions for thorough monitoring of catches of the target species. Although there is updated data on discards of undersized individuals, information regarding non-commercial species like finfish and echinoderms remains scarce.

STECF underscores the lack of recent insights into the effects of mechanised dredges on the benthic community of sandy bottoms. A recent study by Urra et al. (2018) highlights a substantial negative impact of dredge fisheries on echinoderms, with minimal consequences for commercially exploited species. STECF further notes that factors such as the technical specifications of fishing gear, depth, seasonal timing, and bottom composition (granulometry) may influence the extent of damage to benthic organisms.

#### TOR 1.3 - Other aspects:

*- Quantifiable indicators for periodic monitoring and assessment of progress in achieving the objectives of the plan.*

According to the MP, ongoing monitoring will involve the collection of both fisheries dependent and independent data. This entails gathering information on catch, effort, and size distributions. Regular estimation of indicators such as biomass and fishing mortality will persist, with their consistency periodically assessed against predetermined safe thresholds, aiming to secure a sustainable future status for the stocks.

STECF observes that the comprehensive strategy outlined in the MP for continuous fisheries monitoring, coupled with regular estimation of indicators and assessments against safe thresholds, demonstrates a commitment to sustainable management of bivalve stocks.

*- If deemed necessary, provide any recommendations and guidance on how to obtain improved scientific/technical supporting material for the plan. This could be done in terms of collection of data, evaluation of the status of the target stocks, evaluation of conservation measures, impact on the marine ecosystem and monitoring programme.*

The enhanced spatial resolution now available in the MP reveals the allocation of effort for each stock in every sub-area, highlighting potential variations throughout the fishing season or across different years. STECF suggests conducting further investigation into the stock structure of various bivalve species to determine whether stock assessments at the scale of the entire Autonomous Region of Andalusia are appropriate, or if adjustments to consider larger or smaller areas are necessary.

STECF also observes that biological minimum size limits are established in the area for all relevant stocks. Data collected onboard vessels indicate a relatively high number of undersized individuals being retained and landed. However, specific measures aimed at avoiding or reducing these catches of undersized individuals are not currently defined.

## STECF conclusions

STECF concludes that the new information provided to support the MP represents an improvement on previous versions. The annual monitoring of exploited stocks' status has been conducted using various indicators, including catches, efforts, CPUEs, analysis of size distribution of retained and discarded portions, and temporal trends in average size of total and retained catches.

STECF recognizes the effort undertaken to provide a socio-economic study, which includes an analysis of the fishery's profitability, costs, income, and gains.

STECF concludes that the observations made in PLEN 19-03 in conjunction with the revised Management Plan represents an advancement over previous iterations. It incorporates new elements supported by scientific data, such as biomass estimates derived from fisheries independent methodologies and more detailed information on effort allocation and discards, deemed crucial for effective fishery management.

STECF concludes that the status of stocks for *C. gallina*, *D. trunculus*, and *C. chione* is uncertain due to conflicting assessment results obtained from the two models (ASPIC and BioDyn). Specifically, there was a contradiction in the assessment of the sustainability of harvesting for the two former species.

STECF concludes that the TACs set for the fishery have not been reached in recent years, prompting the question of whether the designated TAC levels truly serve as effective management measures, and the proposed CPUE limits have been barely changed since the last MP.

STECF concludes that continued close monitoring of the abundance of these species through CPUE analyses and fisheries independent surveys would be appropriate.

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## 6.9 CFP Monitoring – for early advice by 22 March

### Background provided by the Commission:

Article 50 of the Common Fisheries Policy (CFP; Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013) stipulates: “The Commission shall report annually to the European Parliament and to the Council on the progress on achieving maximum sustainable yield and on the situation of fish stocks, as early as possible following the adoption of the yearly Council Regulation fixing the fishing opportunities available in Union waters and, in certain non-Union waters, to Union vessels.”

### Request to the STECF

STECF is requested to report on progress in achieving MSY objectives in line with the Common Fisheries Policy.

### STECF observations

To address the agreed Term of Reference, STECF expert group (STECF-Ad hoc-24-01) was convened between January and March 2024 to compile available assessment outputs and conduct the extensive analysis required to prepare the annual CFP monitoring report.

The expert group presented a comprehensive report accompanied by several detailed annexes to PLEN 24-01 providing:

1. Design-based indicators by ecoregion for the Mediterranean and Black Seas.
2. Numerical retrospective of model-based indicators.
3. Sensitivity analysis of model-based indicator  $F/F_{MSY}$  to the inclusion of surplus production models.
4. Outputs of JARA fits to the Median.
5. Model-based indicators input data and outputs; and
6. Histogram of the input values of  $F/F_{MSY}$  and stocks specific values of  $B/B_{2003}$  for 2022 and 2021 data for the Northeast Atlantic and the Mediterranean and Black Seas respectively.

The supporting electronic annexes include:

1. CFP monitoring protocols as agreed by STECF PLEN 23-03 (STECF, 2023b).
2. URL links to electronic annexes referring to the reports and stock advice sheets underpinning the analysis.
3. R code for processing all the data and produce indicators for the Northeast Atlantic.
4. R code for processing all the data and produce indicators for the Mediterranean and Black Seas.
5. R code for computing all the European waters' indicators provided in the STECF PLEN 24-01 report. The report and electronic annexes are available at <https://stecf.jrc.ec.europa.eu/reports/cfp-monitoring>.

STECF acknowledges that the report is clear and well laid out, comprehensively describing the analysis undertaken and cataloguing the changes made in the approach since the previous report (STECF-Ad hoc-23-01). STECF further notes that this is the first year that version 5.0 of the CFP protocol (Gras et al., 2023) as agreed by PLEN 23-03 (STECF, 2023b) was applied.

STECF-Ad hoc-24-01 report sets out results of the analyses separately for the Northeast Atlantic (NE Atlantic) and the Mediterranean & Black Seas (Sections 3 and 4, respectively). Based on the above results, progress towards achieving MSY objectives are summarised

below. In this report, "Northeast Atlantic" refers to stocks in FAO Area 27 inside and outside EU waters, and "Mediterranean & Black Seas" refers to stocks in FAO Area 37 inside EU waters. Additionally, at the request of EUROSTAT, an overview of all the stocks in European waters is also presented (Section 5 of the STECF-Ad hoc-24-01 report).

For the NE Atlantic (FAO area 27), the most recent published ICES stock assessments carried out up to (and including) 2023 incorporating data up to 2022 were downloaded from the ICES website on 10 January 2024.

For the Mediterranean & Black Seas (FAO area 37), the information was extracted from the STECF Mediterranean Expert Working Group repositories comprising the most recently published assessments carried out up to 2023 with data up to 2022, and from the GFCM quantitative stock assessment online STAR files comprising the most recently published assessments carried out up to 2022 with data up to 2021. As in previous reports, the Mediterranean and Black Sea dataset was trimmed a year before the NEA, i.e. 2021.

STECF notes that to better understand the results from the model-based indicators, the STECF-Ad hoc-24-01 report now includes additional plots comparing the model-based indicators and the underlying data. STECF recalls that the model-based indicators are closer to the geometric mean than to the median. As explained in the STECF PLEN 23-02 report (STECF, 2023a), this is an expected characteristic of the model-based indicators since they are computed as the geometric mean of the indicators from the individual stock trajectories. For comparison purposes, the STECF-Ad hoc-24-01 report includes model-based indicators based on the median of the indicators from the individual stock trajectories. While the trends are similar, model-based indicators based on the median have slightly higher values than those based on the geometric mean. In both cases, STECF recalls that model-based indicators "hide" a large diversity of situations among stocks, and as such considers that the new plots displaying model-based indicators and underlying data are valuable additions to the CFP monitoring report.

#### Performance perception revision

STECF notes that the current analysis shows a revision of previous CFP performance perception which can be explained by the factors detailed in the following paragraphs. This year's analysis is focused on the trends presented in the results and not on precise quantitative results of the model-based indicators. Furthermore, model-based indicators at EU waters level have not been commented on, although they are presented in the STECF-Ad hoc-24-01 report.

In recent years, STECF highlighted that the model-based indicators were becoming more unstable. This is due to several reasons: changes in the sampling frame, changes in stock assessment models used to compute indicators, inclusion of shared stocks on which CFP's influence may be limited, among others. Furthermore, in the Mediterranean and Black Seas, reduced market opportunities may be impacting the traditional species being targeted by some fleets, resulting in lower catches and consequent lower fishing mortalities. Additionally, the economic cost of fishing may be impacting some other fleet's levels of fishing effort with potentially similar consequences.

This change in perception will require STECF to revisit and discuss the process used to monitor the implementation of the CFP for future evaluations. STECF is now 10 years into this process. There are more stock assessments and with alternative stock assessment models being used, such as biomass dynamic models (17 and 15 in the current exercise for the NEA and the Mediterranean and Black Seas, respectively). There is more diversity of exploitation histories, and significantly more experience of this type of analysis.

In 2022 and 2023, STECF had a thorough discussion about the model used to compute some indicators. Following the revision of the modelling technique, a discussion about the overall monitoring process is now warranted. For example, should results derived from biomass dynamic models be included together with results from catch-at-age assessment



models to compute model-based indicators? Should the sampling frame be less flexible and include only stocks that are managed by the CFP, and if so, how to define a stock managed by the CFP?

### *Trends towards reaching the MSY objective in the Northeast Atlantic and Mediterranean & Black Seas*

The overview below describes the trends in fishing pressure observed in the NE Atlantic and the Mediterranean & Black Sea for the periods 2003 to 2022 and 2003 to 2021, respectively. It applies to the stocks with an analytical assessment and with associated reference points included in the reference list (sampling frame) of stocks for these areas.

## **Overview of stock status**

### *Northeast Atlantic*

The indicators provided in STECF-Ad hoc-24-01 report show that in the NE Atlantic (both EU and non-EU waters), stock status has significantly improved since 2003 (Figure 6.9.1) but that some stocks are still overexploited.

Among the stocks which are fully assessed (Table 3, in STECF-Ad hoc-24-01 report), the proportion of overexploited stocks (i.e.,  $F > F_{MSY}$ , blue line) has decreased from around 76% (2004) to 32% in 2022. The proportion of stocks outside safe biological limits ( $F > F_{PA}$  or  $B < B_{PA}$ , yellow line, Table 5 in the STECF-Ad hoc-24-01 report), computed for the 46 stocks for which both reference points are available, follows a similar decreasing trend, from 80% in 2003 to 41% in 2022.

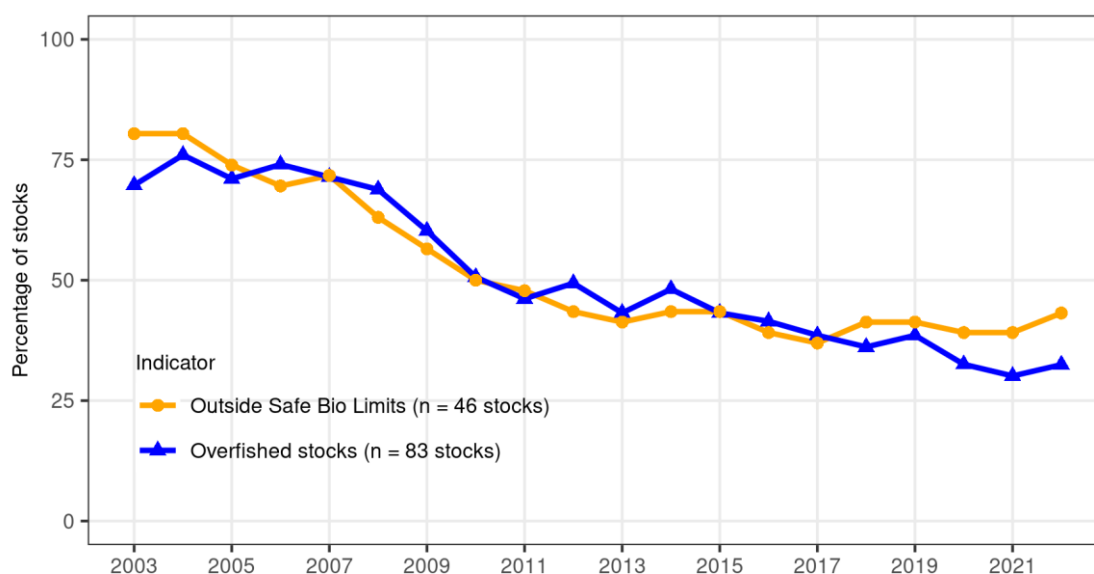


Figure 6.9.1: Trends in stock status in the NE Atlantic 2003-2022. Two calculated proportions are presented: blue line: the proportion of overexploited stocks ( $F > F_{MSY}$ ) (out of a total of 83 stocks) and yellow line: the proportion of stocks outside safe biological limits SBL ( $F > F_{PA}$  or  $B < B_{PA}$ ) (out of a total of 46 stocks).

Combining these two calculated proportions (Table 6.9.1), STECF notes that in 2022, 8 stocks that were exploited below  $F_{MSY}$  were still outside safe biological limits, and 4 stocks inside safe biological limits were still exploited above  $F_{MSY}$ . In addition, 37 stocks had an unknown status with regards to safe biological limits. For the last known year, of the 83 stocks considered, only 28% (23 stocks) were neither overexploited nor outside safe

biological limits, suggesting that the objective in Art. 2.2 of the CFP<sup>6</sup> has not been met fully.

Table 6.9.1: Number of stocks overfished ( $F > F_{MSY}$ ), or not overfished ( $F \leq F_{MSY}$ ), and inside ( $F \leq F_{PA}$  and  $B \geq B_{PA}$ ) and outside ( $F > F_{PA}$  or  $B < B_{PA}$ ) safe biological limits (SBL) in 2022 in the NE Atlantic (both EU and non-EU waters). Unknown SBL refers to stocks whose status regarding SBL could not be assessed.

	Below $F_{MSY}$	Above $F_{MSY}$
<b>Inside SBL</b>	23	4
<b>Outside SBL</b>	8	11
<b>Unknown SBL</b>	27	10

### *Mediterranean & Black Seas*

For the Mediterranean & Black Seas, the number of stocks assessed and for which data is available, has varied from year-to-year and assessment results for some stocks do not extend back to the earlier part of the time-series.

Biomass reference points are now available for 23 stocks, of which 11 were calculated during the Western Mediterranean stock assessment working group (EWG 22-09 and EWG 23-09), and 12 were estimated by GFCM.

STECF notes that for most of these stocks  $F_{0.1}$  was used as a proxy for  $F_{MSY}$  and consequently, the biomass at  $F_{0.1}$  is used here as a proxy for  $B_{MSY}$ . STECF-Ad hoc-24-01 report presents indicators on the number of overexploited stocks and on the number of stocks with  $F$  above  $F_{MSY}$  or SSB below  $B_{MSY}$  (STECF-Ad hoc-24-01 report). In 2024, these indicators were included in the body of the text for the first time to provide more information on the prevalence of overexploited stocks.

### **Trends in the fishing pressure (Ratio of $F/F_{MSY}$ )**

As agreed by STECF PLEN 23-03 (STECF, 2023b), STECF-Ad hoc 24-01 computed the trends in fishing pressure using a state-space model as implemented in the R package JARA (Winker et al., 2019) (<https://github.com/Henning-Winker/JARA>).

The model-based results for the NE Atlantic (inside and outside EU waters), Mediterranean and Black Seas and for all EU waters are displayed in Figures 9, 11, 22 and 28 of the STECF-Ad hoc-24-01 report. Trends in the median values for  $F/F_{MSY}$  are summarised in Figure 6.9.2 over the time series for the NE Atlantic inside and outside EU waters and for the Mediterranean and Black Sea.

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<sup>6</sup> "In order to reach the objective of progressively restoring and maintaining populations of fish stocks above biomass levels capable of producing maximum sustainable yield, the maximum sustainable yield exploitation rate shall be achieved by 2015 where possible and, on a progressive, incremental basis at the latest by 2020 for all stocks".

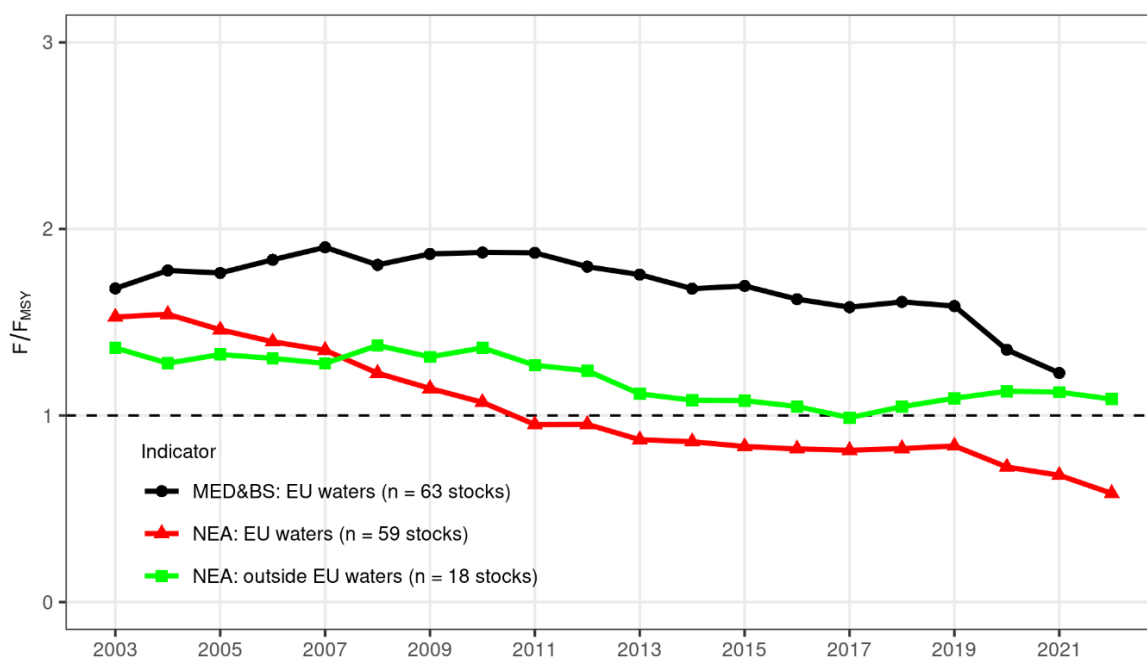


Figure 6.9.2: Trends in fishing pressure 2003-2022. Three model-based indicators  $F/F_{MSY}$  are presented: red line which represents 59 stocks with appropriate information in the NE Atlantic EU waters; green line for 18 stocks also located in the NE Atlantic but outside EU waters; and black line for the 63 stocks from the Mediterranean Sea & Black Seas.

#### *Northeast Atlantic*

In the NE Atlantic EU waters, the model-based indicator of fishing pressure ( $F/F_{MSY}$ , based on 59 stocks with appropriate information – Figure 9 in the STECF-Ad hoc-24-01 report) shows a gradual downward trend over the period 2003-2022.

The same model-based indicator was computed by STECF-Ad hoc-24-01 expert group for an additional set of 18 stocks located in the NE Atlantic outside EU waters (Figure 11 in the STECF-Ad hoc-24-01 report). The indicator shows a stable situation for the period 2003-2010, followed by a decreasing trend until 2017 and a slight increase in the last five years (2018-2022).

STECF notes that the number of stocks that are assessed using surplus production models is increasing (17 stocks this year in EU and non-EU waters for the NE Atlantic and 15 for the Mediterranean and Black Seas). The latest revision of the protocol clarified that only quantitative assessments with tuning indices could be included in the analysis (STECF, 2023b; Gras et al., 2023). STECF-Ad hoc-24-01 report includes a sensitivity analysis to study how the model-based indicators change when stocks assessed using surplus production models are not included. The results indicate that while trends in model-based indicators remain similar, the inclusion of surplus production models leads to lower  $F/F_{MSY}$  values. STECF recalls that there are conceptual differences in  $F_{MSY}$  estimates from age-structured models and from surplus production models. Given the expected continued increase in the number of stocks assessed using surplus production models, STECF observes that their impact in the calculation of model-based indicators should be further monitored and studied.

#### *Mediterranean and Black Seas*

The results presented show a decrease of  $F/F_{MSY}$  since 2011 and a sharp decrease in the  $F/F_{MSY}$  values in the Mediterranean and Black Sea in the last two years. However, it is not clear which driving factors are leading or are affecting the estimated pattern. STECF is not able to assess whether this change reflects a temporary decrease in fishing pressure, or whether this is a longer-term positive trend.

STECF notes that the number of stocks considered in computing the indicator has been varying over time, as some stocks have been recently added and others have been revised in terms of stock boundaries (e.g., including more GSAs).

Many of these “new” stocks are small pelagic stocks, which due to changes in local market conditions have experienced reduced fishing pressure in the last ten years, at least in some GSAs (e.g., GSA7, Gulf of Lions). In the Gulf of Lions, landings of small pelagics, especially sardine, have drastically reduced during the 2000s (GFCM 2022). This is thought to be mainly related to a drop in the size and fat content and the disappearance of old individuals resulting from a change in environmental conditions, which in turn have reduced their economic value (Saraux et al., 2019). This has acted as a disincentive to land such fish.

These changes may have resulted in a reduction of the fishing pressure, and in the sharp reduction of the observed  $F/F_{MSY}$  in recent years. This, is however not reflected in the trend in the Biomass indicator which is not showing any increase (Figure 6.9.3).

Some sensitivity analyses have been attempted removing stocks not included in previous years and/or stocks for which the exploitation rate has been estimated very low (in some cases close to zero). Those sensitivity analyses showed a scaling effect in the  $F/F_{MSY}$  values, but no change in the sharply decreasing trend was observed in the last 2 years. As reported in TOR 6.5 of the PLEN 24-01 report, the inconsistency of the trends between  $F/F_{MSY}$  and Biomass indicator could be due to a reduction in the catches coupled to a lack of reaction in the biomass which results in a lower  $F$  but not a higher SSB.

In conclusion, if a decreasing trend in  $F/F_{MSY}$  seems to be taking place in the Mediterranean and Black Seas, the order of magnitude of this reduction as predicted by the model may be overly optimistic. It may be led by a change in input data (i.e., stocks, type of assessment models), change in the market request, or a combination of both.

### **Trends in Biomass**

The model-based results for the NE Atlantic (EU waters), the Mediterranean and Black Seas and for data-limited stocks in the NE Atlantic (ICES “category 3” stocks) are provided in Figures 13, 24 and 15 respectively of the STECF-Ad hoc 24-01 report. Trends in the median values for biomass over time are summarized in Figure 6.9.3 below. STECF notes there is large uncertainty around this indicator (see Figure 27 in the STECF-Ad hoc-24-01 report).

The model-based indicators for the trend in biomass (Figures 13 and 24 of the STECF-Ad hoc-24-01 report) show a general increase over time since 2007 in the NE Atlantic (EU waters only) for assessed stocks (ICES categories 1 and 2 stocks), whereas data limited stocks (ICES category 3 stocks) for which only a relative biomass index is available from scientific survey data, reached a first peak in 2017 followed by a decreasing trend until 2021, the final value in 2022 being the maximum of the time series due largely to one anchovy stock (Ane.27.9a) as shown in Figure 6.9.3. In the Mediterranean & Black Seas, the median biomass was slightly higher at the beginning of the time-series, but declined until 2011, after which it remained stable.

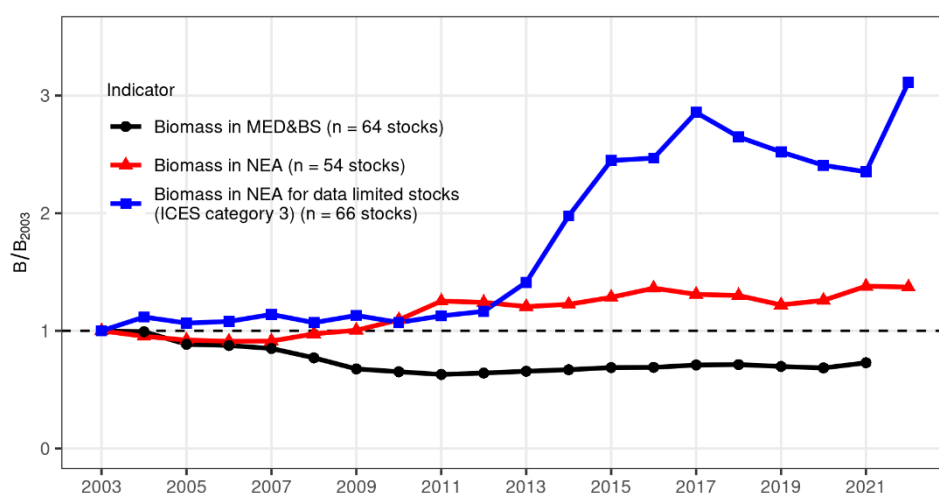


Figure 6.9.3: Trends in the indicators of stock biomass. Three indicators are presented: red line for the NE Atlantic EU waters (54 stocks); black line for the Mediterranean & Black Seas (64 stocks); and blue line for data limited stocks in NE Atlantic (ICES category 3, 66 stocks).

### Trends in Recruitment

The model – based results for the trend in decadal recruitment are given in Figure 16 in the STECF-Ad hoc-24-01 report. This indicator aims to identify long-term trends of recruitment for all stocks and is calculated over a twenty-year moving average. For example, the decadal recruitment for 2019 for a single stock is the ratio between the average recruitment from 2010 to 2019 over the average recruitment from 2000 to 2009 (see Gras et al., 2023 for more details). This indicator is subject to high year-on-year variability. The model output median values are displayed in Figure 6.9.4. The average decadal recruitment indicator shows a decreasing trend until 2011 and an inversion afterwards, the maximum was reached in 2022.

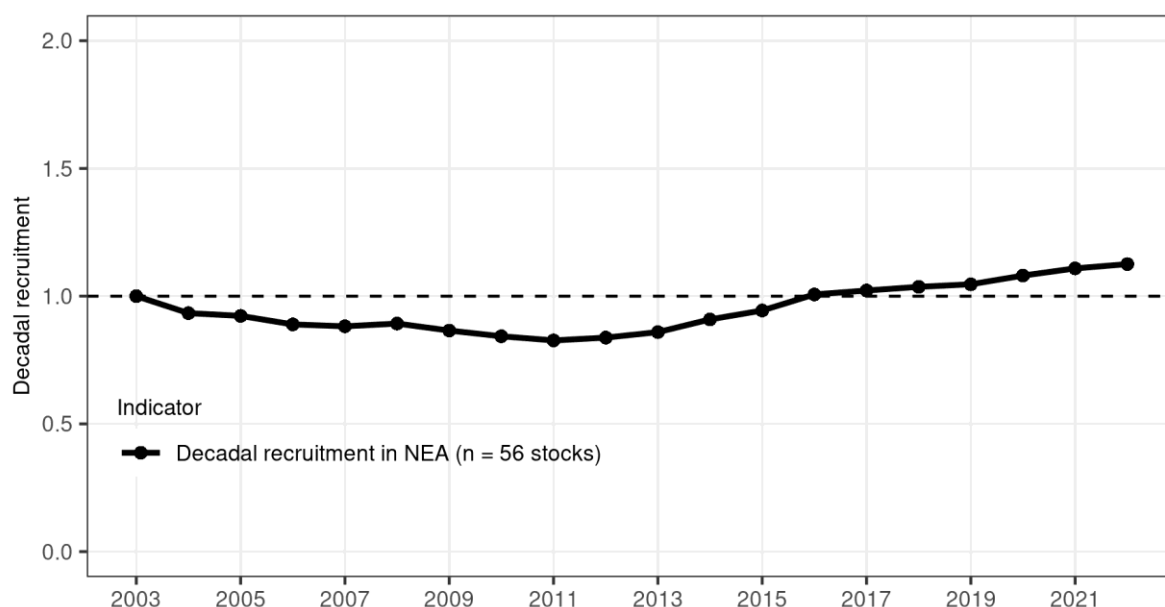


Figure 6.9.4: Trend in median values for decadal recruitment scaled to 2003 in the NE Atlantic area (based on 56 stocks).

### Trends per Ecoregion

STECF-Ad hoc-24-01 report provides indicator trends by Ecoregion for EU waters in the NE Atlantic and the Mediterranean & Black Sea. However, STECF notes that the trends of the model-based indicators by ecoregion in the Med & BS are variable and difficult to interpret. STECF refers to TOR 6.5 for a detailed discussion of the regional trend of the Western Mediterranean where a Multiannual Management Plan (Regulation (EU) 2019/1022) has been implemented since 2020.

In EU waters, the overall fishing pressure in all ICES Ecoregions has decreased and the status of stocks has improved compared to the start of the time-series (Figures 4 and 10 in the STECF-Ad hoc-24-01 report). Accepting the inherent variability in the indicator, for the stocks analysed, the trends give a clear signal that fishing pressure in each region has reduced over the time-series.

### Historical performance

STECF notes that the trends in fishing pressure and biomass observed in this year’s STECF-Ad hoc-24-01 report differ from previous STECF reports and that a state-space model was introduced for the first time following the change in protocol.

Changes of historical perceptions over time (Section 7 of the STECF-Ad hoc-24-01 report) show that in the Northeast Atlantic from 2017 to 2021, there is a tendency to underestimate  $F/F_{MSY}$  when compared to the previous year’s estimate, and, conversely, overestimates  $B/B_{2003}$ . That pattern changed for  $B/B_{2003}$  in 2021 and 2022 (Figures 30 and 31 in the STECF-Ad hoc-24-01 report). The shift in historical perceptions is due to a combination of the new model, used for the first time this year, as well as changes in the dataset.

In the Mediterranean and Black Seas, the current analysis shows a substantial revision of the previous perception of the  $F/F_{MSY}$  and  $B/B_{2003}$ ’s indicators (Figures 32 and 33 in the STECF-Ad hoc-23-01 report). In both cases, the report indicators show lower values for these indicators. This change is due to a combination of the new model and changes in the dataset used for fitting the model. These patterns should be addressed in the future discussion of the monitoring process.

### Coverage of the scientific advice

#### *Coverage of biological stocks by the CFP monitoring*

The analyses of progress in achieving the MSY objective in the NE Atlantic includes all stocks with advice provided by ICES that are at least partially inside EU waters. According to the ICES database accessed for the analysis, ICES provided scientific advice for 224 biological stocks included in EU waters (at least partially). Of these, 100 stocks (45%) are data limited (ICES category 3 and above, Table 6.9.2).

Table 6.9.2: Total number of stocks assessed by ICES for different stock categories in different areas. Note that not all of these stocks are considered of EU relevance (STECF 15-04). Therefore, the numbers are higher than those used in the CFP monitoring analysis.

ICES Stock Category						Total
1	2	3	4	5	6	

Arctic Ocean	7	0	3	0	0	0	10
Azores	0	0	2	0	0	0	2
Baltic Sea	8	1	8	0	0	0	17
Bay of Biscay & Iberia	14	6	18	0	3	0	41
Celtic Seas	25	3	14	0	5	4	51
Greater North Sea	27	5	16	0	3	3	54
Iceland, Greenland and Faroes	19	1	4	0	1	0	25
Widely	7	1	7	0	2	7	24
<b>Total</b>	107	17	72	0	14	14	224

The present CFP monitoring analysis for the NE Atlantic is focused on stocks with a TAC in 2017 and for which estimates of fishing mortality, biomass and biological reference points are available. In 2024, the expert group included in the analysis any stock that was not retained by the sampling frame but had a TAC. As detailed in the STECF-Ad hoc-24-01 report, not all indicators can be calculated for all stocks in all years. The ad hoc group was able to compute indicators for 33 and 83 of category 1 and 2 stocks respectively depending on indicators, years, and areas, and 66 category 3 stocks (Table 2 in the STECF-Ad hoc-24-01 report). Combined these stocks represent a large share of catches, but there is still a significant number of biological stocks present in EU waters that are not included in the sampling frame of the CFP monitoring analysis.

In the Mediterranean and Black Seas region, stock status and trends are only assessed for a limited number of stocks. Regarding the Mediterranean and Black Seas, and following the change in protocol, all stocks having a quantitative assessment are now included in the analysis. STECF notes that, despite the last 2 years' increase in the number of stocks available, there is still a need to increase the coverage of stocks in the CFP monitoring analysis to increase the representativeness of the indicator values for the Mediterranean and Black Sea.

#### **Coverage of TAC regulation by scientific advice**

STECF notes that 158 TACs (combination of species and fishing management zones) in the EU waters of the NE Atlantic are derived using the agreed sampling frame (Gibin, 2017; Scott et al 2017a, Scott et al 2017b) with two additional TACs added in 2023 (STECF-Adhoc-23-01).

STECF underlines that in many cases, the boundaries of the TAC management areas are not aligned with the biological limits of stocks used in ICES assessments. Therefore, the ad hoc group computed an indicator of advice coverage, where a TAC is "covered" by a stock assessment when at least one of its divisions match the spatial distribution of a stock for which reference points have been estimated from an ICES full assessment. Based on this indicator, 53% of the 158 TACs are covered, at least partially, by stock assessments that provide estimates of  $F_{MSY}$  (or a proxy), 48% by stock assessments that have  $B_{PA}$ , with

18% covered by stock assessments that provide estimates or proxies of  $B_{MSY}$  (Table 17 of STECF-Adhoc-2024).

Additionally, STECF notes that, using this index, some TACs can be considered as “covered” if they relate to: (i) part of a given management area, (ii) several assessments contributing to a single TAC (e.g., *Nephrops* functional units in the North Sea) or (iii) scientific advice covering a different (but partially common) area (e.g. whiting in the Bay of Biscay). Such an approach overestimates the spatial coverage of advice (i.e., the proportion of TACs based on a single and aligned assessment) and means that many TACs are still not covered by scientific advice based on  $F_{MSY}$  reference values.

## STECF conclusions

Regarding the progress made in the achievement of  $F_{MSY}$  in line with the CFP, STECF concludes that the latest results indicate a reduction in overall fishing mortality and a general increase in stock biomass in the NE Atlantic over the period 2003-2022.

Nevertheless, STECF concludes several stocks remain overfished and/or outside safe biological limits. Thus, it can be concluded that the objective of the CFP which aims to ensure that all stocks are above biomass levels capable of producing maximum sustainable yield has still not been fully achieved.

In the Mediterranean and Black Seas, STECF concludes there are indications that fishing pressure has decreased since 2019, although no substantial increase in biomass has been observed since 2011.

STECF acknowledges recent advances in increasing the number of stocks included in the analysis and supports ongoing work in ICES, GFCM and STECF EWGs to increase the number of stocks with key reference points further. However, STECF concludes that many stocks still lack definition of some key reference points ( $B_{PA}$ ,  $F_{PA}$ ,  $F_{MSY}$  or  $B_{MSY}$ ).

STECF concludes that there is a need for STECF to discuss the CFP monitoring process to account for the increasing diversity of stocks available for the monitoring exercise.

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## **6.10 Assessing results of ad hoc contracts on technical specifications of codends and devices to reduce wear and tear and selectivity devices**

### **Background provided by the Commission**

Regulation (EU) 2019/1241, the “Technical Measures Regulation” (TMR) entered into force mid-2019 and introduced a new approach regarding the design of detailed regulations regarding the design and operation of some fishing gears. Rather than top-down detailed regulations, the TMR established the essential measures and allowed for the develop specific measures at regional level under the regionalisation process contained in Article 18 of the Common Fisheries Policy<sup>1</sup> (CFP Regulation) - joint recommendations feeding into delegated acts). In addition to regionalisation, the TMR empowers the Commission to establish certain technical details for the design and operation of fishing gears by way of implementing acts.

Some of the key design features of fishing gears that have a significant influence on selectivity include mesh size, twine thickness; the number of meshes around the cod-end circumference; the position and mesh size of square mesh and other escape panels<sup>2</sup> and the attachment of certain devices to protect the gear from wear and tear.

Therefore, to maintain a minimum level of selectivity in demersal trawl fisheries these factors need to be regulated.

The two ad hoc contracts commissioned will review these elements for the Mediterranean and Black Sea and Atlantic perspective.

### **Request to the STECF**

STECF is requested to assess the results of the ad hoc reports and made recommendations and comments on the findings.

In particular, STECF is requested to assess whether the specifications detailed in the ad hoc, stemming from previous regulations, are still relevant and should be regulated.

### **Summary of information provided to the STECF**

The information provided to STECF PLEN 24-01 comprised reports from two ad hoc contracts:

1. “Technical specifications of codends and devices to reduce wear and tear and selectivity devices in the Mediterranean and Black Sea” (STECF #2409)
2. “Technical specifications of codends and devices to reduce wear and tear and selectivity devices in the Atlantic and Baltic Sea” (STECF #2410).

The terms of references/request for both ad hoc contracts were to provide information to assist DGMARE in the preparation of a future implementing act covering the following provisions:

- Devices that can be attached to the towed gear to reduce wear and tear, as previously described in Regulation 3440/1984, and Regulation 1967/2006.
- Technical specifications of codends and twine thickness, based on provisions included in Regulations (EC) 850/98, 2187/2005, Regulation 2056/2001, Regulation 1967/2006, and Regulation 494/2002.

- Technical specifications of selectivity devices to be attached to gear as included in Annexes V-VIII of the TMR and previously described in the above-mentioned legal texts.

The ad hoc contractors were requested to:

1. To assess the necessity of gear attachments and modifications to reduce wear and tear without compromising selectivity and taking account recent developments in fishing gear design in the relevant fisheries.
2. To comment on alternative measures that could be used to achieve the same purpose of protecting fishing gear.
3. To assess the appropriate specifications of codends at regional level including codend circumference, twine thickness, length and shape. STECF is further requested to assess the feasibility of standardization of these specifications across the regions.
4. To comment the technical specifications on selectivity devices (square mesh panels, sorting grids) mentioned in the Annexes V-IX of the TMR and on the possible harmonization of the specifications of such devices across regions.

#### **STECF comments**

STECF notes that both ad hoc reports were structured in accordance with the ToRs listed above.

STECF observes that in 2015 an STECF EWG (STECF 15-05) with a similar set of ToRs as the two ad hoc contracts reviewed here, completed a similar review as these latest ad hoc contracts.

STECF notes that the main task for STECF 15-05 was to define selectivity standards for the main towed gear fisheries (principally demersal fisheries) in Northwestern, Southwestern and the North Sea (including the Skagerrak and Kattegat). The EWG listed and prioritized factors that affect codend selectivity and identified certain core design elements that affect selectivity and managers should consider in a legislative context.

To set the two current ad hoc reports in perspective and compare with previous work, STECF has summarised the main results from the two ad hoc reports and the previous assessment by STECF 15-05. as shown in Table 6.10.1.

Table 6.10.1. Summary of the findings and recommendations of the two ad hoc reports by ToR. Also shown is a previous similar assessment by STECF 15-05.

ToR/Request	Gear element	ad hoc #2409 (Mediterranean and Black Sea)	ad hoc #2410 (North Atlantic and Baltic Sea)	STECF 15-05
1. To assess the necessity of gear attachments and modifications to reduce wear and tear without compromising selectivity and taking account recent developments in fishing gear design in the relevant fisheries.	Bottom-side (belly) chafers	The author believes that chafers on the lower half of the trawl (not just codend) does not affect selectivity. The cited science calls for more investigations.	The author concludes that belly chafers, like any any device that can block, obstruct, reduce or nullify the mesh size, preventing the passage of fish, potentially decreases selectivity but that alternatives measures to protect the codend is difficult to find	May affect selective properties to some extent
	Top-side chafers	The author acknowledges a potential adverse impact on selectivity but concludes that top-side chafing gear may be necessary to protect the codend (and proposes some new specifications to mitigate the risk of obstructing the meshes of the codend)	The author assess that top chafers can greatly reduce selectivity and can be unnecessary given that the bottom part of the codend suffers most from wear and tear from bottom contact	May affect selective properties to some extent
	Strengthening bag	The author acknowledges papers showing a negative effect on selectivity of strengthening bags in NA-fisheries but that such studies are lacking in the MED/BS. He concludes that strengthening bags should be at least 120 mm and with a circumference of 1.3 that of the codend (applicable for MED and BS only)	Several studies point to a significant selectivity effect of strengthening bags	Strengthening bags have a documented effect on selectivity
	Chafing or protection piece	The author does not believe a chafing piece affects selectivity	Can greatly affect selectivity but negative effect can be mitigated by specifying the maximum number of chafing pieces (max 1-2)	May affect selective properties to some extent
2. To comment on alternative measures that could be used to achieve the same purpose of protecting fishing gear.		Not specifically commented upon in the ad hoc report	Materials for trawl fishing gear and have evolved in materials and properties in recent decades and new ones are coming. The author calls for a thorough assessment of the need of old devices to reduce wear and tear in the light of the new materials available. This assessment must take into account that there are different types of trawl fisheries and that they are carried out under different conditions.	N/A

ToR/Request	Gear element	ad hoc #2409 (Mediterranean and Black Sea)	ad hoc #2410 (North Atlantic and Baltic Sea)	STECF 15-05
3. To assess the appropriate specifications of codends at regional level including codend circumference, twine thickness, length and shape. STECF is further requested to assess the feasibility of standardization of these specifications across the regions.	Codend circumference	A key element but not currently regulated in the MED/BS. The author believes that regulatory provisions that limit the number of meshes in the circumference, both for diamond- and square-mesh codends are needed (without proposing a specification)	Increasing the circumference of the codend results in a decrease in the codend mesh opening and a decrease in selectivity.	Codend circumference has a documented effect on selectivity
	codend length	Important design feature but not currently regulated in the MED/BS: The author proposes a minimum mesh size in the rest of the trawl (50 mm) instead of specifying the codend length		unclear scientific basis
	Twine thickness	The author points out that twine thickness of the codend netting plays an important role in selectivity and believes that the limit of a diameter of 3 mm in the codend and extension should not be increased (MED and BS).	An increase in the thickness of the twine (and number of twines) can reduce selectivity. The author point to that twine thickness probably have increased over time (but within legal limits). This increase may have reduced selectivity and resulted in an artificial need to look for more sophisticated selectivity devices to maintain selectivity.	Twine thickness has a documented effect on selectivity
	Mesh shape	The author points out that mesh configurations other than diamond and square (e.g. T90) are already implemented in European legislation.	Materials that do not absorb water, like PE and most new materials, maintain the size and shape of the mesh, which maintains selectivity compared to e.g. nylon meshes that absorb water (shrinks) and reduces selectivity	Mesh shape has a documented effect on selectivity
	Codend shape (ballon codend)	Not specifically commented upon in the ad hoc report	Not specifically commented upon in the ad hoc report	unclear scientific basis
4. To comment the technical specifications on selectivity devices (square mesh panels, sorting grids) mentioned in the Annexes V-IX of the TMR and on the possible harmonisation of the specifications of such devices across regions.	Square mesh panels (position, size and material)	No other implemented selectivity devices besides the square-mesh codend in the MED. Instead of commenting on the possible harmonisation of the current selectivity devices in the annexes to the TMR, the author focuses more on how regional groups can propose new gears that deviate from the baseline gears (incl innovative gears) via joint recommendations. Harmonisation across regions not commented by the author	SMP mesh size and SMP length, width and positioning affects selectivity. No comments about harmonization across regions.	SMP position and size have a documented effect on selectivity whereas the basis for regulating SMP material is unclear
	Sorting grids	Not commented upon	Grid bar spacing affects selectivity. Harmonisation across regions not commented	Grid bar spacing affects selectivity.

STECF notes that the reports of the ad hoc contracts were broadly structured in accordance with the ToRs. However, both reports were focused on ToR 1 and 3 (trawl modifications to reduce wear and tear and codend specifications respectively) rather than on the other two ToRs. Thus, the ToRs on alternative measures to protect trawls (ToR 2) and the harmonisation of selectivity device specifications across regions (Tor 4) were only very briefly (ad hoc report #2410), or not at all (ad hoc report #2409) commented upon in the ad hoc contract reports.

STECF notes that in addition to commenting on and proposing measures in accordance with the ToRs, ad hoc report #2409 also suggests other changes and additions of trawl legislation in the Mediterranean and Black Sea regions regarding fishing gear dimensions (for other trawl components than the codend/extension piece) and multi-rig trawls and more that DGMARE may want to consider.

STECF observes that the motivation for these suggestions is based on that certain gear features are important determinants for e.g., fishing capacity and benthic impact. Furthermore, STECF notes that the proposal to specify a minimum mesh size (50 mm) in the trawl body is presented as a preferred alternative than to specify a minimum codend length.

STECF notes that report #2410 also commented on other trawl elements such as round straps, strengthening ropes, lifting strap, codline, torquette and flappers. However, as these elements are not directly designed to reduce wear and tear of the trawl (as ToR 1 stipulates), these are not further commented upon here.

STECF notes that with regards to ToR 1 and 2, most of the scientific literature referred to in the ad hoc reports on how certain trawl components and designs features affect codend selectivity are the same or contains results in line with those reviewed and summarised by STECF 15-05. This indicates that very limited new scientific information has been published since 2015 and therefore, the conclusions remain valid.

STECF notes that the ad hoc contracts provide little new information or comments about technical specifications for selectivity devices (square mesh panels and sorting grids) in the annexes of the TMR. The information provided (mainly in report #2410) is mostly focused on descriptive texts of how these selectivity devices are currently described in the regional annexes. Similar to STECF 15-05 the central factors that are identified to affect selectivity are square mesh panel mesh size and position and grid bar spacing.

STECF suggests that technical specifications describing selectivity devices such as square mesh panels and rigid sorting grids may be better included as part of delegated acts describing regional technical measures rather than in an implementing act describing gear attachments to reduce wear and tear as well as general specifications on codends.

STECF observes that the authors of the ad hoc contracts in general make similar assessments regarding whether a gear element is likely to affect selectivity or not. In some cases, they differ regarding whether they believe a certain gear element should be allowed or not. These differences are however marginal, meaning that overall, the recommendations and conclusions from STECF 15-05 still hold.

STECF observes core trawl design elements, of those specified in the current ToRs, that affect trawl selectivity and may need to be regulated, include strengthening bags, codend circumference, twine thickness, mesh shape. For other gear elements such as chafers (bottom-side and top-side) and chafing/protection pieces evidence is weaker/lacking but there is consensus (in the two ad hoc contracts and STECF 15-05) that they are likely to affect selectivity. It is less clear for the need to regulate codend length and codend shape, as there is definitive evidence that such elements affect selectivity.

STECF observes that while the elements described above do impact selectivity, the final decision on whether they need to be defined in legislation should take account of the practicalities of being able to monitor and measure these elements at sea on fishing vessels.

## **STECF conclusions**

STECF concludes that the two ad hoc reports cover the ToRs but that only limited information was provided for ToRs 2 and 4.

STECF concludes that the ad hoc reports assessments of the influence of certain gear design features on selectivity and whether they need to be specified in future legislation are similar as the recommendations in STECF 15-05.

STECF concludes that the gear design elements most likely to affect selectivity (strong scientific basis) are strengthening bags, codend circumference, twine thickness, mesh shape, square mesh panel size and position and sorting grid characteristics (e.g. bar spacing, size).

STECF concludes that there is consensus, although less strong scientific evidence, in the three reports that chafers (bottom-side and top-side) and chafing/protection pieces evidence are likely to affect the selective characteristics.

STECF concludes that technical specifications describing selectivity devices such as square mesh panels and rigid sorting grids may be better included as part of delegated acts describing regional technical measures rather than in an implementing act describing gear attachments to reduce wear and tear as well as general specifications on codends.

STECF concludes that there is no definitive evidence that gear elements such as codend length and codend construction affect selectivity.

STECF concludes that in putting in place legislation to regulate gear attachments and modifications, the practicalities of monitoring and measuring these elements should be taken into account.

## **References**

Scientific, Technical and Economic Committee for Fisheries (STECF) – Technical Measures part III (STECF-15-05). 2015. Publications Office of the European Union, Luxembourg, EUR 27223 EN, JRC 95832, 59 pp.

## 6.11 Assessing the results of the ad-hoc contract: study on two indicators used to assess the balance between fleet capacity and fishing opportunities in the Outermost Regions. Background provided by the Commission:

### Request to the STECF

STECF is requested to review and make any appropriate comments and recommendations on the ad hoc contract's report and its findings.

### General aims of the contract

The contractors were commissioned to investigate various elements and properties of the Sustainable Harvest Indicator (SHI) used in the annual assessment of the balance between fleet capacity and fishing opportunities of Member States' fleet segments with particular reference to fleets in the outermost regions of France, Spain and Portugal.

*The Sustainable Harvest Indicator as defined in COM (2014)545 (Commission Guidelines)*

This indicator reflects the extent to which a fleet segment is dependent on overfished stocks. Here, "overfished" means that a stock is fished above  $F_{msy}$ , the fishing mortality rate corresponding to maximum sustainable yield.

Data requirements are: full biological assessments of the stocks fished i.e. where current fishing mortality has been determined; estimates of  $F_{msy}$ , or existing proxies to it ( $F_{max}$  or  $F_{0.1}$ ) and the value of the catch of each stock taken.

Where a fleet segment fishes a single stock, the indicator is calculated simply as

$$\frac{F}{F_{msy}}$$

where F is the most recent value of fishing mortality available from scientific assessments (e.g. ICES and STECF advice).

Where a fleet segment catches fish from several stocks (n) then the indicator is an average of the indicator above for each stock (i), weighted by the value of the landings  $V_i$  of that stock (<sup>7</sup>). The indicator is therefore:

$$\frac{\sum_{i=1}^{i=n} V_i \frac{F_i}{F_{msy_i}}}{\sum_{i=1}^{i=n} V_i}$$

This indicator performs in the same way whether the fleet segment makes catches from different stocks in the same fishing operations or whether this occurs in sequence of different targeted fisheries within the same fishing year.

According to the guidelines, values for the SHI can only be used meaningfully when its coverage is  $\geq 40\%$  (in terms of landed value) i.e. the stocks that contribute to the SHI

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<sup>7</sup> When values are not available, volumes could be used but MS should indicate whether species are high or low value.



for a fleet segment – implying that F and FMSY or proxy estimates are available - must comprise at least 40% of the value of the total landings by that fleet segment.

#### Objectives and tasks

The objectives of the ad hoc contract were to investigate:

- The possible effects of lowering the SHI landings' value threshold in the outermost regions, on the SHI indicator's utility and sensitivity.
- The identification of a landings' value threshold that could be more appropriate to the specificities of the outermost regions.
- Produce analyses and graphs showing inter alia the number of fleets included for various levels of threshold, for the various regions and, to the extent possible, over a 3–5-year period.
- Evaluate the relationship between the precision with which the sustainable harvest indicator can be estimated and the proportion of the catch of each DCF fleet segment that is assessed with respect to F and FMSY.
- The contractor shall examine the possibility of removing the threshold all together for reporting purpose and replace it with a coverage quality qualifier.

The above objectives were addressed through three main tasks:

Task 1. An investigation into the sensitivity of the SHI values and the stability of the proportion of fleets for which the SHI value according to the threshold chosen can be considered meaningful.

Task 2 Bootstrap analyses removing from the computation individual stocks that contribute to the SHI value as well as the progressive removal of each stock. The required analyses shall help the STECF discuss the appropriateness of lowering the threshold from 40%.

Task 3. To investigate whether the coverage quality qualifier can provide context to the segment-specific SHI values.

#### Main results of the ad-hoc contract report

STECF notes that the approach taken by the contractors was appropriate and each task was adequately addressed.

The report describes the background and context of the contract, the data available. The investigations and findings are described together with the main conclusions. In addition to addressing the properties of the SHI for fleets in the Outermost regions (OMR), the report also provides corresponding results for the North Atlantic Ocean (NOA), the Mediterranean and Black Seas (MBS) and Other Fishing Regions (OFR).

The main findings with respect to each task are summarised below.

#### TASK 1: Trade-off between landings coverage and number of fleets for which a meaningful value for the SHI would be available.

A largely-linear, negative relationship between the number of fleet segments for which a SHI would be meaningfully computed and the value of coverage threshold (in terms of landings value) is observed for the MBS, NAO and the OFR (i.e. as the threshold is increased, the number of fleet segments contributing to the SHI estimates decreases).

A negative relationship is also observed for the OMR, although the relationship is less linear than that observed for the other supra-regions and is less steep as coverage increases and steeper as coverage decreases. The reasons for such differences are likely to be related to the fact that most fleet segments in the OMR exploit many different stocks but estimates of F and FMSY are available for only very few of them. Consequently, larger steps in the landings threshold are required in order to include or exclude additional fleet segments.

At the request of STECF PLEN 24-01, table 6.11.1 was produced by the contractors to document which additional fleets segments would have been included in the OMR with the 2021 dataset, given a 25% threshold. Table 6.11.1 indicates that based on the indicator values computed by the EWG 23-15, reducing the threshold from 40% to 25% would have meant that a further 10 fleet segments from the OMRs would have been deemed to have had a meaningful SHI value (2 segments from the Portuguese, 2 from the Spanish and 6 from the French OMRs).

Table 6.11.1 Fleet segments include din the calculation of the SHI indicator based on current 40% threshold and on a lower threshold of 25%. The corresponding number of vessels for 2021 (red are new fleet segments) are also shown (Taken form the ad hoc contract).

Table. Xx Fleet segments included in the calculation of the SHI indicator based on curent 40 % threshold and on a lower threshold of 25 % and the corresponding number of vessel for 2021 (red are new fleet segments )

FS included in SHI calculation for 40 % threshold	Nb Vessel	FS included in SHII calculation for 25 % threshold	Nb Vessel
ESP-NAO-HOK-VL1218-IC-NO-	37	ESP-NAO-HOK-VL0010-IC-NO-	8
ESP-NAO-HOK-VL1824-IC-NO-	6	ESP-NAO-HOK-VL1012-IC-NO-	37
ESP-NAO-HOK-VL2440-IC-NO-	16	ESP-NAO-HOK-VL1218-IC-NO-	34
<i>Sub total for Spain</i>	<i>59</i>	ESP-NAO-HOK-VL1824-IC-NO-	6
FRA-OFR-HOK-VL0010-MQ--A	133	ESP-NAO-HOK-VL2440-IC-NO-	16
FRA-OFR-HOK-VL0010-RE--A	129	<i>Total for Spain</i>	<i>101</i>
FRA-OFR-HOK-VL1012-MQ--A	11	FRA-OFR-HOK-VL0010-GP--A	124
FRA-OFR-HOK-VL1012-RE--A	3	FRA-OFR-HOK-VL0010-MQ--A	133
FRA-OFR-HOK-VL1218-RE--A	15	FRA-OFR-HOK-VL0010-RE--A	129
FRA-OFR-HOK-VL1824-RE--A	4	FRA-OFR-HOK-VL0010-YT--A	83
FRA-OFR-PS-VL0010-GP--A	23	FRA-OFR-HOK-VL1012-GP--A	8
<i>Sub total for France</i>	<i>318</i>	FRA-OFR-HOK-VL1012-MQ--A	11
PRT-NAO-HOK-VL2440-P2--	5	FRA-OFR-HOK-VL1012-RE--A	3
<i>Sub total for Portugal</i>	<i>5</i>	FRA-OFR-HOK-VL1218-RE--A	15
<b>Total</b>	<b>382</b>	FRA-OFR-HOK-VL1824-RE--A	4
		FRA-OFR-PGP-VL0010-RE--A	4
		FRA-OFR-PGP-VL1012-GP--A	3
		FRA-OFR-PS-VL0010-GP--A	23
		<i>Total for France</i>	<i>540</i>
		PRT-NAO-HOK-VL1824-P2--	3
		PRT-NAO-HOK-VL2440-P2--	5
		PRT-NAO-HOK-VL2440-P3--	19
		<i>Total for Portugal</i>	<i>27</i>
		<b>Total</b>	<b>691</b>

### Model estimates

A Generalised Additive Model (GAM) was employed to model the number of fleet segments for which a meaningful value for the SHI could be expected as a function of different landings value thresholds.

STECF notes that the results indicate that at any threshold for landings value, the proportion of fleet segments for which a meaningful value for the SHI would be expected is smallest in the OMR. However, at all threshold levels lower than the current 40%, the biggest proportional increase in the number of fleet segments with a meaningful SHI would conversely be greatest in the OMR. For example, from a putative population of 100 fleet segments, lowering the threshold to 25% is expected to give rise to 47 segments with a meaningful SHI compared to 31 segments when the landings value threshold is 40%, a proportional increase of 51%. The equivalent values for the other supra regions are 27%, 25% and 23% for the MBS, NAO and OFR respectively.

## TASK 2: Trade-off between a decrease of the landings coverage and the effectiveness of the SHI indicator

To assess the trade-off between the landing coverage threshold and the precision of the SHI estimates, a bootstrap analysis was undertaken involving progressively removing stocks from the analysis. The bootstrap procedure provided output metrics for different levels of landing coverage values, as well as the stock coverage values.

The technical details of the bootstrap are given in section 4.2 of the contract report and are not repeated here. As far as it is possible to judge, STECF considers that the analysis was appropriately implemented and hence the results are reliable and informative.

The main findings from the bootstrap indicate the following:

The SHI estimates for fleet segments are less precise (more uncertainty) as the landings' coverage threshold is lowered (i.e. the higher the coverage threshold, the greater the precision of the estimates). However, while the median estimate of the bootstrap seems globally unbiased at low coverage value, the bootstrap also reveals that computing SHI with a low number of assessed stocks increases the risk of biased estimates at the level of individual fleet segments, depending on which stocks are included in the coverage.

Regarding uncertainty, the relationship between the standard deviation of the SHI indicator and the landing coverage value indicates that the median level of uncertainty (sd) shows only a relatively small increase as coverage is reduced to about 10%. However, the 95% and 75% ranges of standard deviations increase much more strongly as the coverage value is reduced, with a worsening trend below a coverage value of 25% (Figure 9 in the contract report). This observation highlights that in general the uncertainty around the resulting SHI values increases as the coverage value declines.

The relationship between the standard deviation of the SHI indicator and the proportion of stocks included in computing the SHI indicator shows a similar pattern to that given above for the precision of the SHI values (Figure 10 in the contract report) i.e. the uncertainty around the SHI values increases as the number of stocks involved in computing the indicator declines.

Regarding the risk of bias at individual fleet segment level, Figure 11 in the contract report shows the results from the bootstrap analysis investigating the relationship between SHI estimates based on a reduced number of stocks and the "true" SHI value based on all assessed stocks. The results indicate that irrespective of the number of stocks used to compute the SHI, the discrepancy between the estimate from the bootstrap and the "true" SHI increases as the proportion of landings from stocks that contribute to the SHI decreases.

What this simulation analysis shows is that at a lower landing coverage, SHI is calculated on relatively fewer stocks than at a higher coverage. Thus, the risk increases that these fewer stocks for which the information is available may not be representative of the global exploitation pattern of the fleet segments concerned. They may also influence the SHI value more strongly than if they were averaged with other assessments and could even be wholly misleading. For example, if the few stocks for which information is available have been assessed as underexploited with respect to FMSY, while other stocks which are also caught are overexploited but are not assessed and hence not included in computing the SHI computation, the SHI value would be less than 1.0 i.e. would be indicated as green while the true SHI would be indicated as red; or *vice versa*. Figure 8 of the report clearly indicates that for fleet segments that catch a high number of stocks, the range of SHI values is smaller for a given coverage value than for fleet segments that catch a limited number of stocks. Consequently, the SHI is likely to be more robust to the choice of threshold if the fleet exploits many stocks for which F and FMSY estimates are available, as opposed to only a few.

### TASK 3: Coverage quality qualifier

Regarding whether a coverage quality qualifier can provide context to the segment-specific SHI values, the contract report proposes several options:

- i. to use fleet segment-specific partial fishing mortality to relate the SHI values for fleet segments to the the overall fishing pressure of a fleet on overfished stocks. This was also suggested by STECF PLEN 23-03. However, this was not investigated further by the ad-hoc contract because it was not explicitly requested of the contractors. At present, STECF is therefore not able to evaluate the properties and utility of such an approach.
- ii. the use additional indicators such as the Economic dependency indicator (EDI), the indicator for the number of overfished stocks (NOS) and the number of Stocks at Risk indicator (SAR) to add context to the resulting SHI values. STECF agrees that such an approach is highly desirable given the uncertainty with the SHI values described above.

### **STECF Comments**

The ad hoc report usefully highlights several properties associated with the SHI and makes suggestions as to how SHI values might best be used in combination with a range of other indicators to help with an assessment of balance between fleet segment-specific capacity and fishing opportunities.

Specifically for the OMR, STECF understands that the purpose of the investigation is primarily to explore whether there is scope to increase the number of fleet segments for which a meaningful value for the SHI can be computed by changing the landings' value threshold or by other means.

STECF notes that computing a value for the SHI for a fleet segment is dependent on the number of stocks that are exploited by that fleet segment and for which the following data are available:

- (i) values for F and FMSY (or relevant proxies) are available and
- (ii) the value of the landings from such stocks as a proportion of the total landing of all stocks exploited by the segment.

Currently if (ii) is less than 40%, the Commission guidelines prescribe that the SHI value cannot be considered meaningful.

Based on the findings in the ad hoc contract report, STECF notes the following:

#### Changing the landings value threshold

STECF observes that lowering the value of the current 40% threshold results in a higher number of fleet segments for which the SHI indicator would be considered meaningful. If reported to an equal number of fleets across regions, in terms of numbers of fleet segments the largest increases would be for the OFR and NAO supra regions and lower in the MBS and OMR regions. However, the proportional increase in the number of fleet segments for which the SHI values could be considered meaningful would be greatest for the OMR.

STECF notes that the above results are derived based on the data used by EWG 23-13 relating to the year 2021. While the results can be considered robust in MBS and NAO where inter-annual variability in the number of assessed stocks is low, it is likely that in the OMR, the number of fleet segments for which a value for SHI can be computed will increase over and above recent levels as the number of available assessments

progressively increases in the OMR (and is expected to increase further in 2024 after the assessment that will take place in EWGs 24-06 and 24-13, cf ToR 7.6).

#### Precision of the SHI estimates

STECF observes that the SHI estimates for fleet segments are less precise (more uncertain) as the landings' coverage threshold is lowered (i.e. the greater the coverage, the greater the precision of the estimates).

Furthermore, STECF notes the lower the landings value threshold used to determine whether a SHI value can be considered meaningful, the greater the risk that the SHI obtained for the fleets with low coverage will be incorrect.

Due to the uncertainty associated with the SHI estimates arising because of the threshold chosen and of the number of stocks used to compute such estimates, STECF stresses that any value for the SHI needs to be carefully interpreted given this uncertainty.

Furthermore, using the SHI alone as an indicator of the balance between capacity and fishing opportunities is not advisable, especially at low levels of coverage. STECF suggest that to ease interpretation, the information on both the actual coverage and the number of stocks used in computing such values be made explicit in the STECF Balance EWG report, to provide further context on whether the SHI values can truly be considered meaningful.

Further, based on the outcomes of the ad-hoc contract, STECF is unable to provide any objective arguments to support the selection of a landings' threshold of 40% or indeed any other value. STECF cannot evaluate how changing the threshold value would affect the global perception of balance within a region or whether it is appropriate to lower the threshold to increase the number of fleet segments for which values of SHI would be considered meaningful.

As would be the case when changing any indicator in guidelines supporting policy, STECF advises that if any decision is made by the EU to change the threshold in the guidelines, both results should be presented in the EWG report to explore the impact of that change.

STECF agrees with the suggestions in the contract report that the lower the coverage of segment-specific SHI values, the more such values need to be contextualised in conjunction with other biological indicators (i.e. the SAR indicator, the EDI and the NOS indicators). The SAR is already specified in the Commission guidelines, and the EDI are routinely computed by the STECF Expert Working group, although not systematically explicitly reported in the Balance EWG report. STECF suggests that such an approach could be investigated during the forthcoming EWG 24-06 to address issues arising for the OMRs.

STECF observes that the EDI is a simple indicator that expresses, as a proportion of the total value of landings from all stocks landed by a fleet segment, the value of its landings from stocks for which  $F$  is greater than  $F_{msy}$ . In other words, the EDI represents the cumulative proportion of the revenue from such stocks to that fleet segment and can be used to inform on how reliant a particular fleet segment is on the revenue obtained from stocks that are being exploited at a rate that is not consistent with achieving  $F_{msy}$ .

STECF notes that the same landings value data are incorporated in the SHI and EDI calculations, but while the properties of the EDI are simple to understand, those of the SHI are complex, as is illustrated by the ad-hoc contract. The main drawback of the EDI is that as for the SHI, it cannot be used in isolation to meaningfully assess whether the capacity of a fleet segment is in balance with its fishing opportunities because both indicators do not take account of the impact that a segment has on the resources it exploits, relative to the overall impact of all fleet segments exploiting such resources. STECF considers that such information is essential if the potential impacts of any action plans arising from the Member States' assessment of balance are to be assessed.

STECF suggests that the proposed coverage quality qualifier based on segment-specific partial fishing mortality, suggested by PLEN 23-03, could help to contextualise SHI and other indicator values in terms of the contribution the segment makes on overall fishing pressure of stocks that are overfished with respect to Fmsy. STECF suggests that such an approach could be investigated further during the forthcoming outermost EWG 24-06 focussing on the Outermost regions.

### **STECF conclusions**

Based on the findings in the report of ad hoc contract and taking account of the STECF comments above, STECF concludes as follows:

STECF concludes that lowering the landings' value threshold to designate a meaningful value for the SHI from the current 40% will lead to a different trade-off between increased number of fleet segments with a meaningful SHI value and increased uncertainty and risks of bias.

As a result of such uncertainty and the absence of any objective criteria to determine an appropriate threshold that would deliver a meaningful value for the SHI, STECF concludes that it is unable to justify on scientific grounds what level of threshold would be appropriate for SHI estimates to be considered meaningful. Hence, STECF is unable to support the selection of a landings' threshold of 40% or indeed any other value.

STECF concludes that using the SHI alone as an indicator of the balance between capacity and fishing opportunities is not appropriate.

STECF concludes also that changing the 40% threshold value will impact the historical perception of regional trends in the SHI values.

STECF concludes that the proposed coverage quality qualifier based on segment-specific partial fishing mortality should be investigated further during the forthcoming EWG 24-06 focussing on the Outermost regions. In addition, the utility of the EDI and NOS indicators as an aid to identify balance/imbalance with fishing opportunities for the OMRs could also be investigated.

STECF concludes that to contextualise the SHI values, the values computed for all fleet segments could be displayed in the Balance EWG report together with the coverage in terms of the number/proportion of stocks exploited by the fleet that contribute to the resulting SHI values and the proportion of the landings' value represented by such stocks.

STECF concludes that changes to the guidelines may also have other unforeseen implications for the ability of the STECF and its Expert Group on Balance Capacity to provide information and advice to the Commission.

STECF concludes that it would seem prudent to investigate the practical implications of any potential or proposed changes to the Commission guidelines before they are implemented.

STECF concludes that the implications of any proposals be first assessed by the forthcoming EWG 24-06 which implies that any advice requested of the STECF could be delivered after its summer plenary meeting (PLEN 24-02) in July 2024.

## **6.12 Assessing a request from Finland for a scientific fishery for Baltic salmon**

### **Background provided by the Commission**

Since 2022 ICES has provided a zero-catch advice for Baltic salmon in subdivisions 22-31. For 2022 and 2023 ICES however considered that under certain conditions some directed fisheries could continue in subdivisions 29 North to 31. For 2024 ICES advised that this consideration was maintained only for subdivision 31. Consequently, the Council prohibited for 2024 directed salmon fisheries in subdivisions 29 North and 30.

On 26 February 2024 Finland notified to DG MARE a project for a scientific fishery of salmon in subdivisions 29 North and 30 involving an undefined number of recreational fishers and all commercial fishers who in 2022 or 2023 reported a catch of at least 20 salmon (estimated by Finland to be about 45 fishers). Scientific fisheries by recreational fishermen are legally not possible under the applicable legislation. A possible scientific fishery involving commercial fishers must comply with the conditions set out in article 25 of the Technical Measures Regulation (EU) 2019/1241. When a project involves more than six vessels, the Commission must seek, if appropriate, the STECF's advice if the level of participation is justified on scientific grounds. As the Finish project seems to involve all main salmon fishers and Finland expects to take up its entire salmon quota, it is appropriate to seek STECF's advice.

### **Request to the STECF**

The STECF is requested to assess if the level of participation of commercial fishermen in the scientific project is justified on scientific grounds. If this was not the case, the STECF is requested to estimate, to the extent possible, what a justified level of participation would be.

### **Summary of the information provided to STECF**

The STECF was provided with two background documents.

1. A note from the Finnish Director of Unit for Fisheries Industries informing DG-MARE of the implementation of a scientific fishery for salmon in Finnish coastal waters in subdivisions 29N and 30 in 2024, with a possible extension in 2025. The note explains the context to this scientific fishery, is a change in the 2023 ICES advice for salmon stocks. This ICES advice was translated into Regulation (EU) 2023/2068 (Baltic Sea Fishing Opportunities), restricting directed salmon fisheries to subdivision 31. Previously salmon fisheries were also authorised in subdivisions 29N and 30 in previous years.

The note recalled the declaration on the management of salmon fisheries in subdivisions 29N and 30 issued by Sweden and Finland at the November Fisheries Council in 2023. It also references the ICES advice on a proposal for alternative fishery restrictions (i.e., a delay in the start of fishing season) instead of a complete closure. However, STECF understands that advice on these alternative measures would not be available before the opening of the salmon season in May 2024.

The objective and proposed setup of the Finnish scientific fishery is detailed in the note as follows:

- The scientific fishery would run from 27<sup>th</sup> May to 31<sup>st</sup> August (usually, the fishing season starts on the 1<sup>st</sup> May).



- The fishery would take place within the 4 nautical mile limit from SD29N and SD30, (i.e. the area where fishery was allowed until 2023).
- All commercial fishermen that have caught at least 20 salmon in 2022 or 2023 would be involved, leading to ~ 45 commercial fishermen, corresponding to one commercial fisherman per 15km of coastline.
- A reduction in the number of trap nets in SD29N from 2 to 1 trap net per commercial fishermen from 27<sup>th</sup> May to 9<sup>th</sup> June (beginning of the season), while 2 trap nets would be allowed from 10<sup>th</sup> to June to 16<sup>th</sup> June and after that 4 trap nets. This would align with the current rules in SD30.
- Recreational fisheries would also be allowed without any restrictions.

Finland states in the note that they would not swap any quotas with other Member States but would transfer unused quota from 2023. By doing so, this would result in a 39% reduction of the Finnish quota compared to last year. This quota has not been reached in recent years.

Fishermen participating in the scientific fishery would have to take scale samples from all wild salmon (there are no reared salmon in Ljungan River) to allow age estimation and natal origin assignment of salmon. There would also be a requirement to report dates and location of catches, alongside biometric information. Results would be reported in spring 2025, before the start of the following fishing season.

The note also discusses the justification for the scientific fishery. The note explains that the zero-catch advice from ICES is mainly due to the situation in the Ljungan river on the Swedish side of subdivision 30 where, salmon in this river are severely affected by non-fisheries factors. The note highlights the socio-economic impacts of the closure, and that existing data have not clearly revealed the occurrence of salmon from Ljungan River in Finnish catches in SD 30. In this context, it is noted that additional genetic analysis with high spatial and temporal coverage to confirm the pre-existing results.

2. The second document provided is a message sent by the European Angler Alliance to MARE expressing concerns about the request, seeing it as *"an attempt to circumvent the Council of Ministers' decision"*.

### Summary of Previous STECF Advice

STECF has not previously evaluated this request. However, STECF has assessed other similar requests from other Member States for the implementation of large-scale scientific fisheries involving more than 6 fishing vessels. These assessments follow from Article 25 of the Technical Measures Regulation (EU) 2019/1241. They concerned a Croatian request for a scientific fishery in West Coast of Istria (STECF PLEN 19-03) and an Italian request for scientific research on Sardella (*S. pilchardus*) in Liguria (STECF PLEN 20-02).

In the responses, STECF emphasised that *"a trial fishery, in the sense of Article 25 of the Technical Measures Regulation, is an experimental fishery aimed to collect a representative sample of the population for the purpose of a biological investigation and that it should not simulate the full fishery."*

STECF observes this conclusion is relevant to this latest request for a large-scale scientific fishery.

### STECF Comments

STECF observes that the assessment and the management of salmon stock fisheries at sea raise specific issues. Nevertheless, the situation in the Baltic Sea is not unique and STECF



observes that a similar need to protect endangered populations has led to the complete moratorium of an Irish drift net coastal salmon mixed fisheries in 2006 (Crozier *et al.*, 2004; Collins *et al.*, 2006; Fitzpatrick *et al.*, 2020).

Consistent with the DG MARE request, STECF will not discuss the ICES advice, nor the possibility of spatial or seasonal measures to maintain a fishery in SD29N or SD30. Therefore, STECF will focus on the relevance of the proposed scientific fishery and on the number of commercial fishermen involved.

STECF observes that according to the Finnish proposal, the start of the scientific fishery would be delayed from May 1st to May 27th to reduce the risk of catching wild salmon. This is supported by tagging data collected from 1956 to 1999. STECF cannot assess the impact of the delayed opening to the fishery.

STECF considers that this would limit the risk of catching salmon from the Ljungan river, though STECF also notes that the tagging data used for estimating returning salmon numbers are dated. More recent estimates of the onset of migration have indicated that the start of migration for salmon from the Ljungan river may occur around-mid May and even later in some years (Whitlock *et al.*, 2018 - figure 6).

Given the status of the different salmon populations as estimated by the latest ICES assessment (ICES, 2023a, 2023b), STECF acknowledges that the recent change in the ICES advice with respect to coastal fisheries in SD29N and SD30 is mainly due to the situation of a single river, for which ICES noted that *"low status of Ljungan salmon is, however, not fishery related but due to disease outbreaks in recent years and closing the fisheries in SD 30 is not expected to increase the recovery rate more than marginally"* (ICES, 2023a).

STECF observes that the number of vessels and the projected level of fishing effort is almost equivalent to the levels in the commercial fisheries in previous years. Following previous evaluations of scientific fishery requests, STECF recalls that a scientific fishery should not aim to simulate the full fishery but to collect a representative sample of the population fitting the purpose of the scientific trials.

In this context, STECF notes that if the biological objective is to demonstrate that there is no risk of catching any salmon from the Ljungan river in SD30 (following the ICES comment that fishery restrictions in SD 30 are not expected to increase significantly the recovery rate), then sampling could be limited to SD30. On the other hand, if the objective is to demonstrate that there is a limited risk of catching any salmon from the Ljungan River in both SD29N and SD30, then STECF considers that sampling effort should primarily focus on the zone where the risk of catching salmon from the Ljungan river is the highest.

STECF considers that covering the whole area and the whole fishing season is not necessarily required and suggests that pre-existing knowledge on the spatial and temporal distribution at sea of salmon from Ljungan River could be used to define the sampling effort (Whitlock *et al.*, 2018, 2021).

STECF observes that comprehensive genetic analyses have already been carried out (ICES, 2023a). Moreover, a model, coupling genetic data and population dynamics have estimated the migration onset, the spatio-temporal distribution at sea of salmon from Ljungan River and their proportions in the mixed stocks at different sampling sites (Whitlock *et al.*, 2018, 2021). STECF observes that this model assigned some salmon collected in SD29N and SD30 sites to the Ljungan River (Whitlock *et al.*, 2018 - fig 11).

STECF observes that those results have already provide information on where and when there is a risk of catching Ljungan River salmon. Given the current low abundance of the Ljungan River population, the scientific fishery is not likely to catch many salmon from this river. Therefore, STECF considers that the added value of the data arising from the scientific survey is likely to be limited.

STECF observes that the number of salmon spawners in Ljungan river is very low. Despite uncertainties, it is estimated to be less than 100 individuals according to the ICES assessment model (ICES, 2023b). This implies that (1) the proportion of salmon from the Ljungan River in the mixed stock at sea is likely to be extremely low, and (2) that even harvesting a few salmon is likely to have a significant impact on the Ljungan River population.

STECF observes that this leads to the paradoxical and risky situation where estimating the proportion of salmon from Ljungan River requires a large scale sampling, but where even the catch of a small number of salmon from this population could have a significant impact on the stock.

STECF notes it is not explicit in the scientific protocol, but it seems that salmon caught during the scientific survey would not be released). Moreover, STECF observes that, even if the scientific fishery catches no salmon from the Ljungan River among the salmon caught in 2024 (possible situation given their abundance), this would not ensure that catches would not occur in 2025. More importantly, STECF considers that the interannual, intra-annual and spatial variations in the mixed stock composition (Whitlock *et al.*, 2018) would not allow deriving general conclusions from the sampling proposed.

STECF recalls that survivability of released salmon in this fishery is high (STECF PLEN 23-03). STECF considers that, in the context of a scientific fishery, releasing wild salmon could be an option to deliver the same scientific results while limiting the risk of detrimental impacts on the depleted population.

STECF observes that no information has been provided on the measures put in place to control that fishermen comply with the scientific protocol (e.g. onboard observer). STECF considers that control aspects are an important element in a scientific fishery involving commercial fishermen.

## **STECF Conclusions**

STECF concludes that the objective of the proposed scientific fishery is unclear. Specifying this objective is essential to developing an appropriate sampling protocol. As mentioned above, the sampling strategy depends on the question at hand, and in many cases could target certain areas or time periods, decreasing the number of salmon potentially caught and the number of vessels required.

(1) STECF concludes that the added value of the proposed scientific fishery is unclear in that the number of vessels is not justified on scientific grounds. If such a fishery is allowed, once the objective is clearly specified, STECF suggests that the number of salmon to be caught and the number of vessels could be determined by the Finnish authorities using pre-existing knowledge on the spatial and temporal distribution of salmon.

STECF concludes that, if a scientific fishery is allowed, it would be worthwhile specifying the measures put in place to ensure that commercial fishermen comply with the scientific protocol.

STECF concludes that to reduce the potential impact of the sampling programme, consideration could be given to releasing wild salmon to deliver the same scientific results while limiting the risk of detrimental impacts on the depleted population. This is justified given the survival of salmon from trap nets has been shown to be greater than 70%.

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## ITEMS/DISCUSSION POINTS FOR PREPARATION OF EWGS AND OTHER STECF WORK

### 7.1 Outcomes and considerations on the VMEs Scoping Meeting to discuss and analyse the availability of bio-economic models and of data for assessing the economic impact of VMEs in Member States

#### Request to STECF

STECF is requested to discuss the outcomes and considerations on the VMEs scoping meeting held on 20 February (including in terms of MS contribution and models used).

STECF is requested to define the next steps and the timeline for these and make any appropriate comments and recommendations.

#### STECF comments

STECF notes that a scoping meeting with Member States and stakeholders was held on 20 February 2024. At this meeting input was gathered on a continuation of the previous socio-economic assessment of closures of Vulnerable Marine Ecosystems (VMEs), which was reviewed by PLEN 23-02. The scoping meeting was proposed by PLEN 23-03 as the first step of a process to assess the socio-economic effects of VMEs on a finer scale.

STECF observes that in preparation for the meeting, a background document was provided to the participants with a description of two possible assessment options for the analyses of VMS and logbook data. These options were:

- 1) Option 1 (STECF analysis): Analyses of VMS and logbook data by STECF following a data call. In this option STECF would run an R-script and analyse displacement effects.
- 2) Option 2 (MS analyses): Analyses of VMS and logbook data by the Member States applying a common R-script provided to Member States.

The results from the analyses from both options would be provided to an STECF EWG planned to be held before PLEN 24-03. The background document also included a short description of the pros and cons of both options.

STECF notes that during the discussion at the scoping meeting there might have been a misunderstanding about the timeline of Option 2 (Member State analysis). Nevertheless, the discussion with the five Member States showed a preference for the harmonised approach of Option 1 (STECF analysis) and hence the possibility for STECF to run the analysis using the DISPLACE model.

STECF observes that Option 1 (STECF analysis) is likely to result in substantial effort regarding data collection and data analyses. However, STECF notes that the advantage of option 1 is that it would allow for a harmonised approach across Member States.

STECF observes that Member States submit VMS and logbook data to ICES annually. In the previous STECF analyses of the socio-economic impact of VMEs, VMS and logbook data from ICES was used for 2022 and combined with AER and FDI data. The analyses were preliminary, and it was apparent that some data was missing. STECF PLEN 23-03 concluded that additional analyses were needed. The impacts on small-scale vessels of Spain were not fully analysed, while no analyses of the displacement of the fishing effort was completed. STECF should complete these additional analyses.

STECF notes that the ICES data used for the analyses includes anonymised individual vessel data which is aggregated by C-square 0.05\*0.05 degree for the publicly available

ICES database<sup>8</sup>. Therefore, the required VMS and logbook data on individual vessel basis could be obtained from ICES for 2022. If a data call was issued in March, then this data would be available for 2023 at the latest in October 2024 for the ICES WGSFD. If STECF could obtain the data from ICES in due time, the 2024 analyses could include an assessment of the displacement effects by comparing the fishing effort in 2022 and 2023.

STECF observes that the ICES data are aggregated to DCF metier Level 6. Therefore, deepwater metiers (e.g. OTB\_DWS) should be identifiable with the existing data call. The 2024 ICES data call may introduce depth and habitat information, meaning where a c-square crosses the 200, 400, 600 and 800m isobaths, or if a c-square contains two habitat types, the analyses would be able to interpret where the effort is taking place in relation to the depth contours. This would allow STECF to focus on those parts of the fleet which fished in the closed areas.

STECF notes that in addition to the VMS and logbook data, additional cost structure data is necessary for running the DISPLACE model. In other similar analyses, data from the AER was used and it should be possible to obtain this data from earlier years through the AER database. However, STECF notes that this data is not available at the metier level for deep-sea fisheries (OTB-DWS) and at the level of broader economic fleet segments used in the AER. For this reason, effort data is necessary to provide the data in the right format, if possible identifying vessels fishing in the deep sea.

STECF observes that the relevant Member State experts could be tasked to address the possibility to provide cost data specifically for deep-sea vessels during EWG 24-03. In an ideal situation this data would be comparable to the metier data from ICES (OTB-DWS). STECF notes that if the disaggregation of the fleet segment data is not possible, the DISPLACE model could, with certain caveats, still be run with the average cost data for the AER economic fleet segment.

The previous STECF analyses of the socio-economic effects of the VMEs (ad hoc contracts for PLEN 23-02) were criticised by industry for not providing a complete picture for some fleet segments, especially the small-scale longline fleet of Spain. STECF notes that individual vessels can be more affected than the analyses of the full fleet used in the original analysis. STECF further notes that Member States have carried out national analyses on VMEs – for France (<https://archimer.ifremer.fr/doc/00853/96517/>) and Galicia (Fernandez-Arcaya et al. 2024).

STECF notes that to be able to assess the effects on individual vessels at the forthcoming STECF EWG, it is crucial that the relevant scientists in the concerned Member States are encouraged to participate at the meeting.

STECF considers that it is essential to receive feedback from the sector regarding the impacts of protecting the VMEs with closed areas that exclude certain fishing techniques.

STECF considers that social science methods like focus groups or semi-structured interviews should be applied for this purpose. The objective of those interviews or focus groups would be to gather feedback on the results of the analyses but also information on the reaction of the fleet on the closures. The feedback of the stakeholders would provide a better picture of the impacts the models cannot assess.

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<sup>8</sup> see guidance at <https://github.com/ices-eg/ICES-VMS-and-Logbook-Data-Call/tree/main> for data submission. The data (hours fished, total weight and total value) is aggregated by metier, length category and c-square. In cases where a c-square only has 1 or 2 vessels active in it, data providers assign a unique id to those vessels and submit them as well.

During PLEN 24-02, STECF will propose suitable candidates for conducting the interviews in September/October 2024 in due time for the EWG meeting later in the year (preferably before PLEN 24-03).

### **STECF conclusions**

STECF concludes that the previous socio-economic assessment of the impacts of VMEs may have underestimated the negative impacts of the closures of the VMEs. This is mainly because the effects at the individual vessel level was not considered. For this reason, STECF plans to conduct additional analyses and collect information via social science methods which would be provided to a future EWG set up to analysis the economic impacts of the closures.

STECF concludes that as deep-sea fisheries are usually not present in the same fishing grounds every year it should be considered whether data from additional years should be included in the analysis.

STECF concludes that by comparing the effort levels in at least 2022 (fished inside and outside the VME) with the effort levels 2023 outside the VMEs, the effect of the closures that were implemented in 2022 could be assessed. This requires data referring for 2023.

STECF concludes that this comparison may highlight the real re-allocation of effort vs. the prediction from the DISPLACE model. If ICES data for 2023 is not available in time to run the DISPLACE model in June/July 2024 then there is a need to move the EWG forward in time.

STECF concludes that the modeler assigned for running the DISPLACE model will work with available data on cost structures and VMS and logbook data. STECF further concludes that EWG 24-03 should elaborate how robust cost structure data could be obtained.

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## **7.2 STECF reflections on the indicators (SHI, SAR, economic) used for the assessment of balance of the fleets in the outermost regions**

### **Request to STECF**

STECF plenary is requested to reflect upon input provided regarding alternative approaches applied to the current indicators, in the outermost regions.

### **Summary of the information provided to STECF**

The French authorities provided two letters to the European Commission, regarding *"Additional data relating to a segment analysed by the Scientific, Technical and Economic Committee for Fisheries (STECF) for the French assessment of the balance between the fishing capacity of the fleets of the Member States and the fishing opportunities and clarification concerning the French request to take account of the specific characteristics of the outermost regions in the annual report on fishing capacity"*.

1. *"Additional data relating to a segment analysed by the Scientific, Technical and Economic Committee for Fisheries (STECF) for the French assessment of the balance between the fishing capacity of the fleets of the Member States and the fishing opportunities"*. The French administration presents additional data to calculate the stock at risk (SAR) indicator for a fleet segment of the outermost region, La Reunion. The letter argues that the newly calculated proportion of value of landings of blue marlin is 9.38% for the HOK VL1012 segment and therefore below the 10% threshold applied to the SAR.
2. *"Clarification concerning the French request to take account of the specific characteristics of the outermost regions in the annual report on fishing capacity"*. Twenty-three recommendations are formulated on the balance indicators SHI, VUR, economic indicators and SAR and on the segmentation. These are summarised in the table below, together with STECF observations, potential actions needed and consequences for the Annual analysis of Balance/Capacity.

### **STECF comments**

Regarding the first letter, STECF has the impression that the letter provided may include some inaccuracies as follows:

The letter argues that the values provided in the table in the document are given in landings value (euro) while, as stated in the guidelines, the SAR indicator should be calculated based on catches in volume (kg as defined in the DGMARE Guidelines for the Balance/Capacity analysis).

Secondly, using the values provided in the table, STECF calculates the total sum to be €706,291, and not €697,765 as stated in the letter. On this basis, the landings share of blue marlin for the HOK VL1012 would total 10.48% ( $\text{€}74,002 / \text{€}706,291$ ) and not 9.38% as mentioned in the table, which would therefore remain above the 10% threshold. Based on these inaccuracies, STECF is not able to suggest changes to the SAR indicator estimated by EWG 23-13.

Regarding the second letter, and as a general comment, STECF notes that while recognising the specific situation of outermost regions, there are other fleets in other regions, particularly small-scale fleets, which may be confronted to similar issues. Change or flexibility of indicator definitions or segmentation in the assessment of the balance of the fleet capacity with fishing opportunities are questions relevant to any fleet. To allow



comparison between fleets and ensure level playing field to the maximum extent possible, STECF suggests that the guidelines themselves should be maintained as generic as possible and avoid discriminating among fleets, regions and Member States.

Furthermore, STECF is of the opinion that several requests listed in the letter may actually be addressed within the current frame without a need to update the guidelines, either by increasing consistency between the national data provided to the AER data call and the expectations in the national fleet report, by providing additional information in the national report, or by suggesting marginal changes on the presentation of information in the Balance/Capacity STECF EWG report.

STECF observes that the 23 recommendations made in the letter from France are of various nature and dimensions. STECF has the following observations on these recommendations:

- Two of them could lead to direct textual changes in the guidelines if deemed necessary for clarity purposes (recommendations #2, 9):
- Several recommendations could be at least partly addressed by actions taken at national level to improve internal consistency between submitted AER data and balance-capacity requirements (recommendations #10, 11, 13, 16, 17, 22, 23)
- Attempts to increase the coverage of SHI by increasing stock assessment information available is a positive development which should be encouraged. Quality checks need to be performed to ensure the stock assessments provided are fit for purpose (Recommendations #3, 5, 6)
- The Member State can provide additional indicators in their national reports as complements of the ones already available but not as substitutes (Recommendations #4, 7, 18, 19, 21; and see also section 6.11 of this plenary report).
- The specificities of some OMR fisheries can lead to poor performances on the balance indicators. For those, appropriate contextual social information is important to appreciate the non-market and community value of fisheries. The work of EWG Social regarding among others national profiles and community profiles will provide a sound structure for conveying this information (Recommendations #12, 18)
- Some minor improvements could be made in the display of information in the STECF Balance/Capacity EWG report (Recommendations #4, 14)
- Some recommendations are not of a simple generic scientific nature and might be partly alleviated by addressing the previous recommendations (Recommendations #8, 15)

Further STECF observations are detailed in the following table:

	Indicator	recommendati on from France	Rationale for recommendatio n (added value according to France's letter)	STECF reflection	Action needed	Consequences for the Balance EWG 24-15
1	SHI	Decrease the level of threshold (currently 40% of the value of landings)	It is difficult to reach the 40% threshold in OMR due to multi species nature of fisheries and small size of each stock	This issue is investigated in TOR 6.11 of this report - 40% is indeed arbitrary but evidence is weak to support changes of this threshold by another equally arbitrary threshold. A reduction in threshold will increase the number of fleets assessed, but will also increase SHI uncertainty and risk of bias. It will also affect the general perception of balance in a region, and the interpretation that can be made of the indicator	See conclusions of ToR 6.11	Suggestion to provide explicitly the coverage value and the number of stocks involved in the EWG report
2	SHI	Delete the mention to F and FMSY values in the availability condition in the guidelines	Unclear	The fishing mortality achieving MSY is explicitly mentioned in the CFP objectives, and mentioning it in the guidelines remains pertinent. STECF notes however that proxy values to F or Fmsy can be and are already used to calculate SHI indicator (e.g. F0.1 in the Mediterranean Sea, or harvest rate). The guidelines may reflect this possibility as long as the estimation of the reference points and current F (proxy) are validated, but it remains unclear to STECF what such a modification would actually change to the current process.	Feasibility of using other proxies to be discussed in the preparation Balance EWG	
3	SHI	Allow the use of national assessments in the calculation of SHI	When national assessments are the best (or only) available knowledge they should be used to calculate SHI. They are already used for the local management	This point was discussed in PLEN 23-03 on how to address this. Exploratory investigations were performed in 2023 by EWG 23-13, with a test for inclusion of 18 new national stocks assessments for the outermost regions. This thus proved technically possible, but ended with the inclusion of only one new OMR fleet segment comprising 4 vessels. The importance of including new stock assessments is thus identified and expected but it may take time before enough new assessments are available to show a substantial effect on SHI calculation, depending on the size and representativeness of the stocks newly assessed. In addition, a transparent process is still needed to ensure quality control of	As discussed by PLEN 23-03, priority should be given to get the national stock assessments endorsed by the responsible RFMO. Until that happens, the incoming outermost region EWG 24-06 will provide an opportunity to discuss and document such	When assessments are validated, their results can be added to the database used for the calculation of SHI

	Indicator	recommendation from France	Rationale for recommendation (added value according to France's letter)	STECF reflection	Action needed	Consequences for the Balance EWG 24-15
				such data. National assessments need to be externally validated in some way before being included in the SHI calculation.	assessments in 2024. (see TOR 7.6 of this plenary report) . Discussion shall continue on how to address in future years	
4	SHI	Recognize alternative indicators in the guidelines (such as NOS, EDI, SHI based on based on volumes not values)	When SHI cannot be calculated in full, those alternative indicators also provide information on the biological status of the stocks	Some of those indicators are indeed already calculated by the EWG and available in the annexes, although STECF acknowledges that they are not always consistently reported (e.g. EDI is already reported in the traffic light table for several Member States but not in the OMR tables). However, STECF stresses that the threshold and interpretation of the other indicators in the context of characterizing imbalance are not fully straightforward either. See also TOR 6.11.	See also TOR 6.11.	Care should be given by the EWG that all indicators are reported consistently for all MS and all regions in the report
5	SHI	Use one or several representative species as local indicators of fishing pressure on all fished species. Add in the guidelines the conditions for a species to be considered "representative"	Would decrease the number of stocks needed to be assessed	STECF acknowledges the point of trying to increase the SHI coverage by reducing the assessment requirements using representative species. However, the selection of "representative" species could be very subjective and a scientific methodology to select such species does not exist yet. In addition the work performed under 6.11 has shown that when reducing the number of assessments, the SHI value becomes more sensitive to the status of individual stocks, and bias may occur. STECF remains of the opinion that supporting and incentivizing the increase of standard stock assessments is a preferable avenue.	The outermost EWG could also explore the possibility to use representative species	
6	SHI	Be able to include assessments of groups of species where scientifically	Would increase the number of stocks taken into account in the SHI calculation	STECF acknowledges that if species are landed and reported together as a genus <i>spp</i> , they will also be assessed together. STECF underlines though that group assessments may be misleading if covering species with different dynamics and life history traits. STECF warns also that allowing this should not create an incentive to not provide data at the species level. As for the previous recommendation, STECF encourages improving	If the group assessments are endorsed they should follow the same path as for recommendation 3.	

	Indicator	recommendation from France	Rationale for recommendation (added value according to France's letter)	STECF reflection	Action needed	Consequences for the Balance EWG 24-15
		relevant and justified		monitoring at species level and supporting and incentivizing the increase of standard stock assessments as a preferable avenue		
7	SHI	Introduce a flexibility in how the SHI is interpreted for fleet segments with low impact on the resource and a low number of vessels (<5 vessels)	When the share of catch (volume) of a segment is low the information should be provided	STECF note that an exploratory indicator using partial, fleet-specific Fs instead of total F was proposed by PLEN 23-03. This indicator could not be investigated as part of ToR 6.11, but may be explored further, time pending, by EWG 24-06. STECF notes that this could be added as a complementary indicator but not as a replacement of SHI.	May be further explored by EWG 24-06 or by an ad-hoc contract	
8	SHI	Where appropriate differentiate pelagic to demersal species	the demersal stocks are harder to assess	It is difficult to return a generic technical answer, and STECF remains of the opinion that guidelines should not contain too case-by-case specific exceptions like this one. As for previous points, STECF suggests that priority support should be given to increasing the number of validated demersal stock assessments, and to make use of the exploratory alternative options discussed in several of the previous recommendations. This may contribute to mitigate the importance of that particular case.	This point could also be discussed in the OMR EWG	
9	VUR	Clarify the authorised alternatives calculation methods in the guidelines		If the guidelines wording is unclear acceptable alternatives must be clarified.	Feasibility of clarifying the VUR calculation method to be discussed in the preparation Balance EWG	
10	VUR	Approve the VUR percentile 90 French calculation method and add it to the guidelines	In the absence of information on this theoretical maximum, the proxy corresponding to the 9th decimal place (P90) of this variable was used by the French	STECF is of the understanding that the non compulsory variable maxseadays could advantageously be used for that purpose and be provided in the economic AER data call. STECF suggests that maxseadays may not necessarily represent the absolute maximum, but should remain meaningful. STECF is aware that this maxseadays might be calculated differently by different MS, and there are indeed suggestions as to how to calculate this data	The MS could improve internal consistency between AER data and balance-capacity requirements, and provide the maxseadays variable, either according to the current guidelines <sup>9</sup> or using the suggested	

	Indicator	recommendation from France	Rationale for recommendation (added value according to France's letter)	STECF reflection	Action needed	Consequences for the Balance EWG 24-15
			authorities in their 2023 capacity report. 90 % of vessels have a lower activity	available on the DCF website <sup>9</sup> e.g. as the average of the days at sea of the top 10 vessels that were most active in each fleet segment. The P90 seadays could thus be provided in the optional maxseadays variable by the MS. That way, the STECF EWG could calculate the VUR in the same way as in the national report.	proxy P90 seadays per fleet segment in the maxseadays variable in the economic data call.	
1 1	VUR	Allow sub-segmentations according to the level of activity of the fleet segments	a sub-segment of the least active vessels will be identified with an imbalance indicator and the vessels with the most activity will no longer be penalised as part of their action, with an imbalance which does not represent their daily fishing efforts	STECF is of the understanding that the new ACTIVITY column in the economic data call can be used to add a sub-segmentation based on the level of activity, to make that sub-segmentation explicit	The MS could improve internal consistency between AER data and balance-capacity requirements by using the ACTIVITY <sup>10</sup> column in the economic data call to add sub-segments	
1 2	VUR	Establish an <i>ad hoc</i> contract to define how best to interpret the utilisation rate of production capacity	The fishing dependency of vessels in segments less than 12 metres should be further assessed given that some vessel	STECF acknowledges the social importance of part-time fishing in small-scale fleets, but notes that these considerations on the interpretation of other indicators might best only come to play when the SHI is in balance. With this in mind, STECF agrees that fleets with part-time fishers or fishers active in seasonal fisheries are more likely to display an unfavourable VUR, without this being necessarily a true sign of imbalance. STECF suggests that the community profiles in development in the social EWG will help	The MS should encourage participation of national experts to the Social EWG 24-05 in order to contribute to developing pertinent community profiles for the fleets concerned.	

9 See [https://dcf.ec.europa.eu/data-calls/definitions-and-terminology/m/maximum-days-sea\\_en?prefLang=it](https://dcf.ec.europa.eu/data-calls/definitions-and-terminology/m/maximum-days-sea_en?prefLang=it)

10 See [https://dcf.ec.europa.eu/data-calls/definitions-and-terminology/a/activity-level\\_en?prefLang=it](https://dcf.ec.europa.eu/data-calls/definitions-and-terminology/a/activity-level_en?prefLang=it) 2

	Indicator	recommendation from France	Rationale for recommendation (added value according to France's letter)	STECF reflection	Action needed	Consequences for the Balance EWG 24-15
			owners have other activities aside from fishing	structure the social information to be provided as support of the other indicators. The section on social analysis from the national profile could be used to best interpret this indicator, as it includes a detailed subsection on "qualitative information on the role of fisheries in relation to other sectors (e.g. dependence from tourism/Ho.Re.Ca. sector)" (EWG 20.14) and also from EWG 23.17 " 5. Current Trends, issues and developments. 5.1 Societal trends: describe how main drivers [...] impact the Member state society in connection with the fisheries. For instance [...] changes in seafood consumption, changes in main economic sectors related to seafood and fisheries (e.g. tourism)". Notwithstanding this, the community profile would provide more detailed information for smaller areas as the OMR.	Additionally, EWG Social should check the inclusion of this balance issue in the list of questions on the use of social analysis for DGMARE and/ or with the work of EWG Social and WGSOCIAL on social indicators, to consider VUR as a usable indicator for social analysis.	
13	VUR	Adapt the 'VUR' indicator by sea facades on the basis of justifications from the Member State:	the specific cyclonic conditions faced by fishermen in the ORs must be taken into account, but also new challenges that are more difficult to predict, such as the phenomenon of sargasse, which may block access to certain ports or fishing area	The national report can use a sub-segmentation to report indicators as long as they also provide the indicator at the same level as the EWG for comparison purposes. The national report can thus include a sub-segmentation that would give more information at the regional level. In addition, as for the previous point, community profiles may be an adequate structure for providing the narrative explaining the specificities of the sub-segments.	The MS could use additional segmentation (see point 23) to provide data to the economic data call at the appropriate level. Alternatively, sub-segmentation can also be added to the national report. In that case supporting data must also be included	
14	Economic indicators CR/BER and RoFTA	Allow STECF to take account of the clusterisation of segments for economic indicators in order to comply with the	Allow segments with few vessels to benefit from calculated and validated economic indicators, considering that the indicators	STECF notes that the clustering of fleets for the economic indicators is not specific to the outermost regions, but is a standard issue for many MS. STECF acknowledges that the current display of the clustered information (economic indicators) in the balance table in the EWG report can be confusing, as color (green or red) is only provided for the "main" fleet segment of the cluster, and other segments are colored grey, which gives the that only part of the fleets have information. STECF suggest that alternative table design are explored, including options such as	MARE to discuss with the EWG what formatting would be useful for them	EWG could investigate a different table format to lift the confusion

	Indicator	recommendation from France	Rationale for recommendation (added value according to France's letter)	STECF reflection	Action needed	Consequences for the Balance EWG 24-15
		reporting arrangements for economic data provided for by the DCF.	calculated for a segment are valid for vessels and segments grouped with that segment	merging the cells of indicators available at the cluster level only or give all the segments in the cluster the same color. Ultimately, the design decision should be discussed between the Balance EWG and the end-users.		
15	Economic indicators CR/BER and RoFTA	The guidelines should allow for clusterised segments with a low number of vessels to consider CR/BER and RoFTA to be optional and do not condition the assessment of the segment's balance		STECF notes that this is a not a scientific decision and it should be left to the Commission not to the STECF. However, STECF notes that exceptions made on the basis of arbitrary thresholds are always cumbersome, and should be avoided to the extent possible.		
16	Economic indicators CR/BER and RoFTA	Review the constraints of DCF segmentation (e.g. gear/area/length)	to limit the number of segments with few vessels	STECF notes that clusters can be used in the economic data call when fleet segments have too few vessels.	MS can cluster the fleets with less than 10 vessels <sup>11</sup> , according to the guidelines reported in COMMISSION IMPLEMENTING DECISION (EU) 2022/39	
17	Economic indicators	Consider a reflection on economic	CR/BER and RoFTA indicators are highly	STECF notes that PGECON provided guidelines to calculate those variables. See:		

11 See the COMMISSION IMPLEMENTING DECISION (EU) 2022/39 of 12 January 2022

	Indicator	recommendation from France	Rationale for recommendation (added value according to France's letter)	STECF reflection	Action needed	Consequences for the Balance EWG 24-15
	CR/BER and RoFTA	indicators in the context of difficulties in assessing the variables 'value of capital' and 'capital depreciation' in the ORs.	dependent on these variables, a reflection and opinion on the issue would be useful;	<a href="https://datacollection.jrc.ec.europa.eu/documents/d/dcf/2019_workshop_pgecon_capital-value-estimations">https://datacollection.jrc.ec.europa.eu/documents/d/dcf/2019_workshop_pgecon_capital-value-estimations</a> In addition, the AER 2024 decided to switch to a fixed interest rate when calculating economic indicators		
18	Economic indicators CR/BER and RoFTA	Explore the possibility of using complementary economic and social indicators for the OMR fleets	given the importance of small fisheries in the ORs, the CR/BER and RoFTA indicators, which are more suited to large vessels with a high capital intensity, may not be adapted to the economic and social evaluation of artisanal fisheries in the ORs.	STECF observes that economic indicators measure the economic performance and viability of the fishing fleets. In some cases where the economic added value is limited but the social importance of fishery is proven (for food safety or other reason) additional social indicators can be provided.	The MS should encourage participation of national experts to the Social EWG in order to provide input for the upcoming community profiles. EWG Social should consider this issue when detailing the content of national profiles and/or community profiles and/or social indicators.	
19	SAR	Establish thresholds above which landings are taken into account in calculating the 10 % of catches of a stock at risk. E.g. landings of less than 1 tonnes at	For FS harvesting shared or large stocks the SAR can be calculated imbalance although the relative impact of the FS is low compared to the overall impact of the international	STECF notes that this situation is not specific to the OMR, but also occur in e.g. in the MBS or NOA close to Norwegian waters. SAR related to the 10% of the total stocks is calculated relative to the EU fleet segments (FS), as data from outside is not available to the EWG, and EU is not in position to manage external fleets. SAR aims to give an estimation of the impact of the FS on stocks at risks. Establishing a minimum landing is not biologically pertinent considering: 1/ SAR deals with many different species with variable individual weight 2/ 1 ton or even less can still be very critical for some stocks, and many small fleets catching few quantities each can nevertheless sum up to non-negligible quantities.	The calculation enables to distinguish the SAR selected via 10% of the FS landing (dependency of the fleet to the stock), 10% of the stock EU landings (contribution of the fleet to the EU landings of the stock) or both of the conditions.	The distinction of these criteria would maybe be of benefit to be presented more clearly in the Balance report.



	Indicator	recommendation from France	Rationale for recommendation (added value according to France's letter)	STECF reflection	Action needed	Consequences for the Balance EWG 24-15
		national level or 1 % of international landings of the species of which a stock is at risk by STECF	fisheries on the stock	Increasing the threshold for FS below 12m can also be hazardous as few vessels may land large /shared stocks but they also may be in position to land more local stocks (incl. sensitive species). More generally, STECF has advised in the past against setting exemptions on the basis of catch percentages thresholds of the species to be protected, as this can also perversely incentivize increasing catch volumes to reduce percentages.	MS could still use the table from the main report table to visualize the STECF calculation and provide some clarification on the situation the FS is facing in the annexes	
20	SAR	Adjust the threshold to 20 % instead of 10 % for fleet segments less than 12 metres.		STECF notes that the effect of an increase of the threshold from 10 to 20% is unknown and should be investigated before making any conclusion. If the threshold were to be modified, it is unclear whether only the OMR fleet segments could benefit from it. As for the discussion on the SHI in ToR 6.11, the basis for any threshold remains arbitrary, and difficult to set.	The SAR and its threshold could be investigated further during the EWG 24-06	
21	SAR	Allow the Member States, in paragraph 10.2, for each segment, to justify the relevance of the classification as SAR resulting from the calculation formula described in paragraph 10.2 of the Guidelines when it is able to demonstrate the viability of the stock in the light of the		STECF notes that the selection of the stocks at risk are made available on a yearly basis in annex of the Balance Capacity report, MS are able to use it and refer to the methodological section and related report for clarification. In the case of divergent opinions on the status of some stocks, additional information can be provided by the MS in the national report.	MS can use the SAR provided by the preparatory EWG every year, as already used by some MS.	

	Indicator	recommendation from France	Rationale for recommendation (added value according to France's letter)	STECF reflection	Action needed	Consequences for the Balance EWG 24-15
		catch data at its disposal				
2 2	General segmentation issues	Allow STECF to be able to compare the sub-segmentations established by the Member State with the data used by STECF by adapting the data flows generated by the various calls for data by the Member States in order to match the ad hoc segmentation with the data. Where appropriate, if an <i>ad hoc</i> segmentation is introduced, a data format could be provided by STECF so that the Member States can provide the raw data used for the calculations related to this		STECF notes that there are many ways to increase the subsegmentation by using the columns ACTIVITY, GEAR or FISHERY in the format of the AER data call. To allow for an easier work flow for the EWG, the data of the economic data call should be provided at the most appropriate level. In any case if an alternative segmentation is provided, it should be in addition to the official one, not in replacement. When providing information for both segmentations (the official and the national one) in the national report, the MS must though realise that the balance EWG does not have time and manpower to rerun the analysis performed earlier by the preparatory EWG, for an alternative segmentation. So the STECF cannot cope with individual MS specificities during its normal procedure.	The MS could improve internal consistency between AER data and balance-capacity requirements, by choosing the most appropriate segmentation in the economic data call and make best use of the columns ACTIVITY, GEAR or FISHERY. If deviations are still needed, they should be provided in addition to the DCF segmentation and supporting data must also be provided.	

	Indicator	recommendation from France	Rationale for recommendation (added value according to France's letter)	STECF reflection	Action needed	Consequences for the Balance EWG 24-15
		alternative segmentation;				
2 3		Allow target species to be used in the definition of fleet segments	a more precise segmentation with targeted species groups (in addition or replacement of gear), would allow to better reflect the activity of the fleets and to identify more representative indicators for these.	STECF notes that the FISHERY column added in the AER templates can be used for that purpose. From the guidelines it states: " <i>The GEAR and FISHERY dimensions can be updated as needed. Please contact the JRC data submission team to add a specific Fishery or Gear code.</i> " The current list of FISHERY codes can be found here <a href="https://dcf.ec.europa.eu/data-calls/definitions-and-terminology/f/fishery_en">https://dcf.ec.europa.eu/data-calls/definitions-and-terminology/f/fishery_en</a> . In addition STECF notes that the RCG_ECON work on alternative fleet segmentation could be investigated. The proposed approach introduces a standardised multivariate approach for characterising fisheries fleet segments by hierarchical agglomerative cluster analysis (HAC) of their catch composition	The MS can contact the JRC data submission team to add a specific Fishery or Gear code	

## **STECF conclusions**

Regarding the letter revising the SAR indicator for the La Reunion fleet segment HOK VL 1012, STECF concludes that the information provided is not accurate enough to calculate the indicator and STECF cannot conclude on the appropriateness of the request.

STECF concludes that guidelines and indicators should remain as generic as possible and apply equally for all fleets, as OMR issues may also be relevant for other regions.

STECF concludes that the provision of additional indicators or more disaggregated segments by the Member State compared to the official indicators and segmentation is allowed in the national fleet reports. However, STECF highlights that the EWG does not have the time to assess in detail all extra information and alternative sub-segmentation in its regular process.

STECF concludes that the 40% threshold for SHI (recommendation 1 in the table) and 10% for the SAR (recommendation 20) are arbitrary. As stated in TOR 6.11 of this plenary report, changing to other thresholds will remain equally arbitrary, and the impact of doing so on the actual assessment of balance cannot be easily foreseen.

STECF concludes that some of the twenty-three recommendations made could be further explored during the upcoming outermost EWG 24-06 in May 2024, to gain a better understanding of the properties and robustness of some indicators (Recommendations #3, 7, 8, 20 See also ToR 7.6 of this report)

STECF concludes that meaningful changes to the guidelines should continue to be explored in the course of 2024, building on EWG 24-06. This would provide further insights during STECF July Plenary, that then could be channeled to the preparation of the Balance/Capacity EWG.

### **7.3 Update on Guidelines for the data transmission monitoring tool and of the Work Plan and Annual Report templates**

#### **Request to STECF**

STECF is requested to:

- (1) Agree on improved data issues assessment cycle and the monitoring tool, proposed by the Commission (MARE and JRC), previously discussed in STECF 23-01.
- (2) Approve an update of the guidelines for the data transmission monitoring tool, previously approved by STECF 23-01.
- (3) Discuss and approve improvements to Work Plan and Annual Report guidelines and code list, in view of harmonising MS input for the DCF IT platform.

#### **STECF comments**

STECF observes that several suggestions to amend the Data Transmission Monitoring Tool (DTMT) guidelines were reported in previous STECF plenaries and Expert Working Groups (EWGs). Those suggestions refer to amendments of the assessment options, refining the definitions of some fields and updating of the “decision tree” reported in the guidelines.

STECF observes that the assessment option “follow up” should encompass data issues in which Member States did not answer the question or the comments from the Member State or the end-user to the issue are unclear, or the information provided by end-users and Member State is contradictory.

STECF notes that an additional assessment option named “unsatisfactory - to be revised” should be added to the assessment options and used in case the Member State indicates that the data issue (incorrect or missing data) could be resolved in the next data call.

STECF observes that the definition of “recurrent” should be clarified because the definition is still not clear for the experts that assess data issues during the EWGs. STECF notes that “recurrent” should only describe an identical issue that have occurred in different years.

STECF notes that to further increase the comprehension and correct application, the “decision tree” of the DTMT guidelines would benefit from an inclusion of examples of different data issues.

STECF observes that DG MARE has proposed a timeline for the assessment of the data issues. According to this proposal, the EWG 24-08 will assess only high severity issues and the low-medium severity issues from the Annual Economic Report (AER) data call, while EWG 24-15 will assess all the issues from 2023, to check whether Member States have resubmitted the data and data issues can be closed, and high-severity issues from the AER data call.

STECF observes that, once STECF has completed the assessments of data issues, DG MARE should close each data issue and flag it as an actual data failure or not.

Concerning the third point of the request to STECF (Discuss and approve improvements to Work Plan (WP) and Annual Report (AR) guidelines, STECF observes that there is a need to amend the WP and AR guidelines to better align the documents for the Regional Work Plans and the DCF IT platform. Most of the proposed amendments were developed by EWG 23-16 and aim to accurately report shared sampling under multilateral agreements.

## **STECF conclusions**

STECF concludes that the suggested amendments to the DTMT guidelines and platform should be implemented. STECF concludes that the “decision tree” of the DTMT guidelines should be complemented by examples of the different cases to increase the comprehension and correct application of the guidelines. STECF concludes that a TOR to address this task should be added to the TORs for the next EWG 24-08.

STECF concludes that the DTMT platform should include additional entries in the column “DG MARE Decision”. STECF concludes that appropriate entries could be: “closed – data failure” and “closed – not a data failure”.

STECF concludes that Work Plan and Annual Report guidelines should be amended according to the proposed revisions.

## **7.4 Preparation of EWG 24-02: Methodologies for Mediterranean stock assessments and the estimation of reference points**

### **Background provided by the Commission**

STECF was provided with a draft of the proposed Terms of Reference for EWG 24-02 discussed at STECF Bureau level.

### **Request to the STECF**

STECF is requested to discuss the draft TORs for EWG 24-02.

### **STECF comments**

STECF discussed the draft ToRs for EWG 24-02 to be held in Ispra, Italy 8-12 of April. The first ToR consists of developing a methodology to deliver Fmsy or Fmsy proxy targets and corresponding Fmsy ranges for the key target stocks of the West Med EU MAP. Draft ToR 1 is separated into ToR 1a involving all the stocks in the West Med EU MAP and ToR 1b referring only to hake in EMU 1 and EMU 2, which are considered vulnerable stocks. The second ToR consists of evaluating the usefulness and making suggestions for further improvement of the tools developed in Qualitrain (see also ToR 6.4 in this report).

Regarding the first ToR, STECF acknowledges the importance of providing Fmsy ranges for the most vulnerable stocks such as the hake stocks in EMU 1 and EMU 2. However, STECF considers that the specific request for these two stocks (ToR 1b) can be integrated into the more generic request for all stocks covered by the West Med EU MAP included in ToR 1a.

STECF notes that providing Fmsy or Fmsy proxy targets and Fmsy ranges for the stocks of the West Med EU MAP constitutes a methodological challenge. Currently available Fmsy ranges were derived in 2015 based on empirical equations (STECF EWG 15-09 and STECF EWG 15-18). Therefore, they do not necessarily comply with the Fmsy range definition outlined in Article 2 of the West Med EU MAP that was implemented in 2019. Developing appropriate Fmsy or Fmsy proxy targets and Fmsy ranges requires assumptions on stock-recruitment models that remains challenging for these stocks due to the short time series and to the narrow range of observed biomass.

Therefore, STECF notes that the stock-recruitment models (geometric mean and hockey-stick) considered for the calculation of biological reference points (STECF EWG 22-03) are considered a good starting point. However, this does not preclude additional stock recruitment model checks that could lead to alternative models. STECF notes that it is important to keep consistency between the basis to define biological reference points and MSY targets. A selection of alternative models may lead to a proposal to revise some of the current biological reference points.

STECF has discussed the methodology extensively to address the first ToR. At present, STECF considers that an ad-hoc contract for the exploration of methodological approaches for the estimation of Fmsy ranges is not necessary (see section 6.6. of this report). However, STECF notes the importance of advancing as much as possible on the methodology to be used during the EWG. The JRC is already developing code that will be used at the EWG and all the preparatory work for this ToR will continue in the following weeks before the EWG.

STECF notes that the first ToR consists of a series of steps to be carried out in 2024, to prepare towards the full implementation of the West Med MAP from 1 January 2025:

1. EWG 24-02 will develop the methodology to calculate Fmsy ranges and will calculate preliminary values.
2. Following the agreed methodology, the Western Mediterranean stock assessment working group EWG 24-10 will provide final biological reference points, Fmsy or Fmsy proxies and Fmsy ranges based on the latest stock assessments.
3. These results will be transferred to EWG 24-12 on Fishing effort regime for demersal fisheries in West Med to include Fmsy ranges in the evaluation of the implementation of the West Med MAP. This process is the same as was followed in 2022 for the biological reference points (EWG 22-03, EWG 22-09 and EWG 22-11).

Regarding the second ToR, STECF observes that the R packages developed within the scope of Qualitrain include dummy data sets that could be used to evaluate the tools. Alternatively, real data from previous data calls could also be considered.

STECF observes that the expertise required for addressing the two ToRs is different and STECF highlights the importance of having a broad range of experts able to contribute to both ToRs. This may be a challenge with respect to the second ToR as many of the potential participants are already familiar with the Qualitrain approach and outputs and they would therefore not be able to test the methodology as a new user.

STECF notes that as the ToRs are still being finalised and are not yet publicly available, an extension of the registration period should be considered to ensure that enough experts can attend the EWG. Suggested changes to the draft TORs have been submitted to DGMARE.



## **7.5. Preparation of EWG 24-05 on social data in fisheries**

### **Request to STECF**

ToRs published on the STECF website.

The EWG on social data will be, inter alia, analysing 10 additional National Fisheries Profiles (produced through ad hoc contracts). Along with the existing 3 profiles, DG MARE is planning on publishing these profiles on the JRC website in the course of 2024, as per the recommendation of the STECF in Report 23-17.

The STECF is requested to clarify what the process would be for STECF to endorse all of these National Fisheries Profiles (review requirement, etc.) and consider having 2 rapporteurs for the July Plenary given the amount of work entailed.

### **STECF observations**

STECF observes that in line with previous advice (PLEN 23-01 and 23-03) the National Fisheries Profiles (NFP), prepared by ad-hoc contracts, should be published through an interactive web format. However, given the interest in the content of the NFPs already shown by stakeholders, a publication of the ad-hoc contracts as annexes of the EWG 24-05 report could be supported as an intermediate solution under certain conditions.

STECF considers that these conditions would be that it is made clear that the content of the NFPs is authored by national experts and that the content and quality of these are solely the responsibility of those national experts/institutions.

STECF further points out that a clear reference should be made to the fact that the ad hoc contracts only show a snapshot in time and will be presented in final web format in the future. In the web format, it will be important that the timelines for when the data has been collected are clearly stated and uploaded so that it is possible to clearly identify which parts have been updated and when.

STECF observes that EWG 24-05 is currently only able to verify the correct use of the suggested structure of information as stated in EWG 23-17 together with possible national deviations from the ad-hoc contract.

STECF recognises that the NFPs are only part of the future pool of social data, which will also include community profiles and other social indicators.

STECF notes that the 10 new NFPs have not yet been delivered and the content and quality of these is not known now.

### **STECF conclusions**

STECF concludes that the EWG report will be assessed according to STECF procedures during PLEN 24-02. Furthermore, STECF concludes that the NFPs as prepared by the ad-hoc contracts can be published as annexes of the EWG report as an intermediate solution under the conditions stated above.

STECF emphasises that rapporteurs will be assigned for each of the Terms of References for PLEN 24-02 according to the expertise of the members and considering the overall workload on the plenary.



## 7.6. Preparation of EWG 24-06 on Outermost Regions

### Background provided by the Commission

#### 7.6.1. *The French Guiana waters*

In the context of the annual Fishing opportunities regulation, the Commission authorises vessels from Venezuela, via a licensing system (45 licences), to fish for Red Snapper (*Lutjanus purpureus*) in the waters off the coast of French Guiana on a yearly basis. Since several years however, there is a recorded uncertainty regarding the management of the stock of red snapper targeted by Venezuelan vessels, that has been referenced in the 2021 STECF Plenary report<sup>12</sup>. The French authorities have commanded a new report by IFREMER scientific institute, which delivered results in 2023.

The STECF is requested to assess the conclusions of the IFREMER report and advise on measures to recover the red snapper stock in Guiana waters through the licensing system and via technical measures.

#### 7.6.2. *Guidelines for the assessment of balance in the outermost regions*

STECF is requested to discuss the draft ToR for the Outermost regions as follows, "EWG is requested to provide views and concrete recommendations on the current suite of indicators (COM(2014) 545 final) applied for the assessment of balance of the fleets in the outermost regions".

#### 7.6.3. *Recommendations ahead of update of the DCF workplans by Member States for the Outermost Regions*

STECF is requested to discuss the draft TORs for the EWG.

### Request to the STECF

STECF is requested to discuss and draft the ToRs for the EWG 24-06 considering the three requests above.

### STECF comments

STECF has discussed the possible ToRs for the EWG, and the expertise needed to reach them. STECF draws the attention to the importance for participation at EWG 24-06 of experts in fisheries management, socio-economy, stock assessment and OMRs fisheries. In this context, STECF has proposed TORs, considering that these may be adapted depending on the experts attending the EWG.

The EWG is scheduled virtually from 13-17 May 2024, to be co-chaired by Lisa Borges and Armelle Jung. The agreed TORs will be published on the STECF website.

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<sup>12</sup> Opinion "6.3 Guyana snapper", Scientific, Technical and Economic Committee for Fisheries (STECF) – 66<sup>th</sup> Plenary Report (PLEN-21-01).



## 7. CONTACT DETAILS OF STECF MEMBERS AND OTHER PARTICIPANTS

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## STECF

The Scientific, Technical and Economic Committee for Fisheries (STECF) has been established by the European Commission. The STECF is being consulted at regular intervals on matters pertaining to the conservation and management of living aquatic resources, including biological, economic, environmental, social and technical considerations.

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