ISSN 2467-0715

European Commission

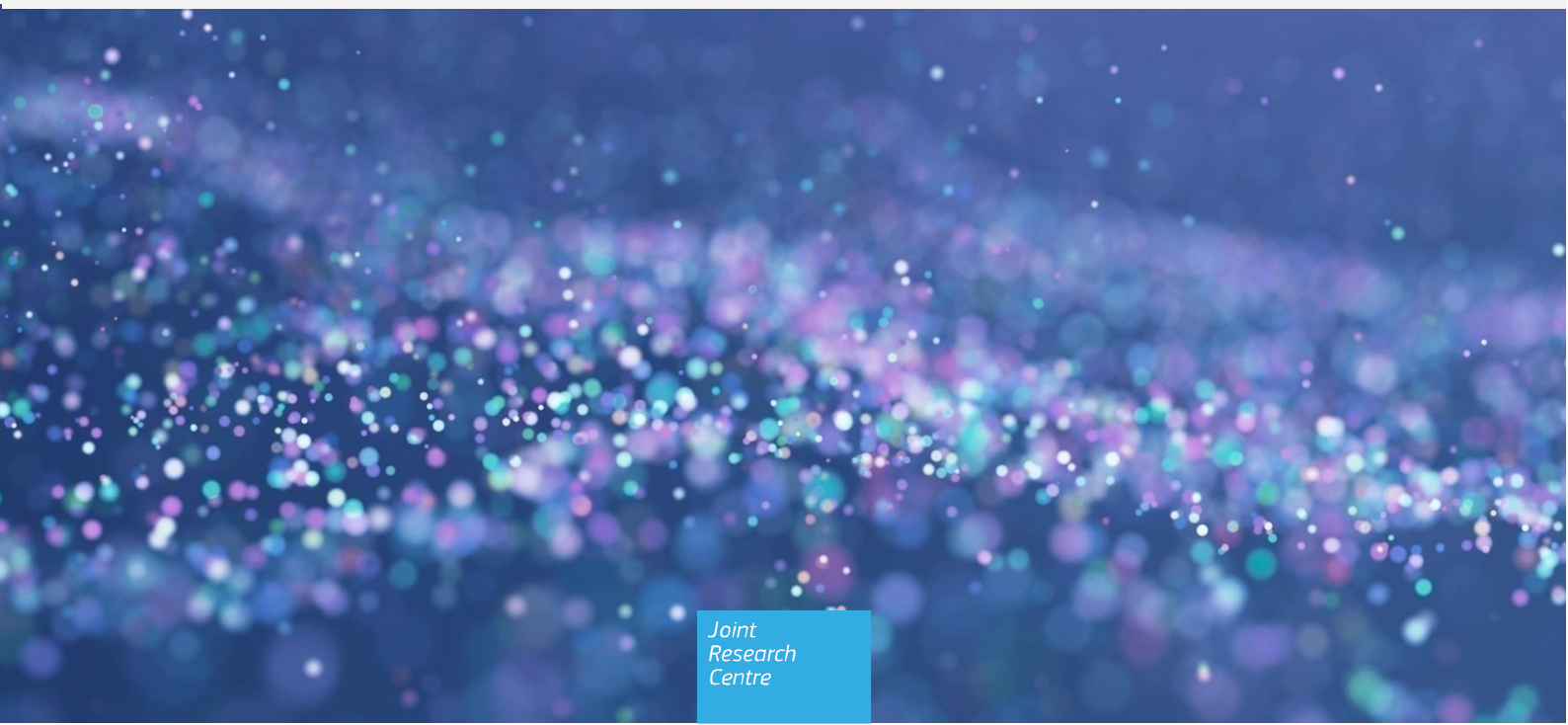
Scientific, Technical and Economic Committee for Fisheries

–

78th plenary report (STECF-PLEN-25-01)

Nord, J., Doerner, H. (eds)

2025



Joint Research Centre

EU Science Hub
https://joint-research-centre.ec.europa.eu

PDF ISBN 978-92-68-27531-3 ISSN 2467-0715 doi:10.2760/8733382 KJ-01-25-296-EN-N

Luxembourg: Publications Office of the European Union, 2025

How to cite this report: European Commission: Joint Research Centre, Scientific, Technical and Economic Committee for Fisheries – 78th plenary report (STECF-PLEN-25-01), Nord, J. and Doerner, H. editor(s), Publications Office of the European Union, Luxembourg, 2025, https://data.europa.eu/doi/10.2760/8733382, JRC142271.

CONTENTS

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 78th plenary from 24 to 28 March 2025.

78th PLENARY REPORT OF THE SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (PLEN-25-01)

24-28 March 2025

1. INTRODUCTION

The STECF held its spring plenary on 24-28 March 2025 at the JRC in Ispra, Italy.The meeting was held as a hybrid meeting. The meeting was chaired by the STECF chair Jenny Nord.

2. LIST OF PARTICIPANTS

The meeting was attended in person by 27 members of the STECF and 8 JRC personnel. Four STECF members 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.

The following two STECF members did not attend the plenary meeting:

Leyre Goti

Nedo Vroc

3. INFORMATION TO THE PLENARY

STECF term of office

The spring plenary meeting was the last plenary of the current STECF. The term of office of the current committee will end at the time of the summer 2025 plenary meeting (1st plenary meeting of the new STECF, appointment expected for June 2025). DG MARE thanked the STECF for all its work and commitment over the past three years. DG MARE acknowledged the excellent service and commitment of the long-serving members who did not re-apply for membership Paloma Martin, Paz Sampedro, Georgi Daskalov and Luc van Hoof. A special thank you went to the chair Jenny Nord, supported by the two vice chairs Cecilia Pinto and Raul Prellezo, for successfully steering the committee and providing high-quality CFP advice and to the JRC team for their work and dedication in support to the STECF and DG MARE.

The STECF and JRC colleagues commemorated Gianna Fabi who sadly passed away on 19th March 2025. Over several years, Gianna made numerous significant contributions to the work of the STECF, offering her expertise and dedication with unwavering commitment to STECF Expert Working Groups.

4. STECF INITIATIVES

Evaluation of the CFP

STECF invited DG MARE to inform the committee on STECF's role in the ongoing CFP evaluation process. DG MARE suggested that requests on the functioning of the CFP within the CFP evaluation process could be made to STECF in two steps: firstly, during the July plenary (PLEN 25-02) and secondly in technical discussions with STECF members later in the year. DG MARE also informed that committee members are welcome to provide input within the public consultation process that is open until 21 of April. Considering the short remaining time frame of the CFP evaluation, STECF agrees with DG MARE that a ToR on the July plenary and technical discussions with the committee members would be the preferred way forward.

5. ASSESSMENT OF STECF EWG REPORTS

5.1 EWG 24-16: 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 24-16 met at JRC in Ispra, Italy, 21-25 October 2024. The meeting was attended by 18 experts with a broad range of expertise (economics, mixed fisheries modelling, gear technologists and social scientists), including three STECF members and one JRC expert. Additionally, five observers from different backgrounds were present. The EWG was hold on a hybrid format to ensure active engagement and collaboration among the diverse skill set of experts.

STECF considers that the EWG adequately addressed the TORs and has the following specific comments on the ToRs addressed by EWG 24-16:

ToR 1 – Review the outputs of ad hoc contract to determine suitability of data and code for use by the EWG.

STECF notes that the EWG has reviewed and approved the objectives of the ad hoc contract, which were to collect, compile, and quality-check the data and code required to assess the biological and economic impact of technical measures implementation on the two case studies outlined in EWG 24-16. The data and code was successfully implemented during the EWG and a summary of the available case study-specific materials and existing information gaps, was provided as an annex in the report.

ToR 2 – Apply the framework identified in EWG 23-15 (STECF 2024a) to two case studies: hake in Bay of Biscay mixed fisheries and hake in the Western Mediterranean mixed fisheries. Each case study will where possible assess in the short term:

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 (1 year forecast).**

STECF notes that the EWG successfully applied the framework proposed by EWG 23-15 to the two case studies. The EWG provided a detailed overview of task distribution, the selected

model, biological and fleet data, gear studies, economic and social data, and current and potential future scenarios, to outline the progress made during the EWG.

STECF notes that for hake in the Bay of Biscay mixed fisheries case study, the EWG used the ICES WGMIXFISH model, which employs the FLBEIA R package for a multi-stock and multi-fleet bio-economic evaluation under the MSE approach. For hake in the Western Mediterranean mixed fisheries, the EWG used BEMTOOL, a comprehensive multi-species, multi-gear bio-economic tool applied in the Western Mediterranean MAP. While both approaches support fisheries management, the Bay of Biscay case study started with a simpler, more flexible model that can be easily adapted to specific needs, whereas the Mediterranean case study employed a fully developed tool.

STECF notes that in each case study the BioEcon package identified in EWG 23-15 was adapted as the foundation for developing an interactive decision support tool to assess the potential impacts of technical measures. In case of the Bay of Biscay case study the framework summarizes the modelling approach, data inputs, and methods for simulating biological, fleet, and economic components, while also providing a ‘Shiny App’ for visualizing results. In case of the Mediterranean case study the model output was fed directly into the BioEcon application to standardize the output even though this approach offers less transparency.

STECF notes that the impact of a gear modification in the BioEcon package is evaluated through age-disaggregated catchabilities of the fleets, however, as selectivity information is collected and implemented based on length, its impact should be assessed accordingly.

STECF observes that the EWG reviewed gear selectivity estimates for hake and other key species caught in the Bay of Biscay and Mediterranean mixed fisheries. The EWG concluded that T45 or T90 mesh orientations in Bay of Biscay mixed species trawl fisheries offer the best potential for improved hake selectivity, and that post-escape mortality should be considered when evaluating the effectiveness of technical measures in achieving management goals. For hake in the Mediterranean case study, the scenarios explored during the EWG 24-12, demonstrated an improved selectivity for hake upon increase of the mesh size from 40 mm square mesh size to 45 mm square mesh size.

STECF notes that gear selectivity trials often focus on a single species rather than broader catchability changes in mixed fisheries or take place in areas with low species abundance, limiting their relevance.

STECF notes that the EWG identified the key economic variables needed to parameterise the BioEcon model for assessing the impact of technical measures and concluded that the main economic variables are available in the AER, along with the methodology for deriving them. STECF notes however, that the economic fleet segments in the AER might be too broad to assess gear changes in specific fisheries or areas.

STECF observes that the EWG conducted a thorough review of the social variables collected under the Data Collection Framework, as well as the new social indicators assessed by the latest STECF EWG on social variables (EWG 24-05). The EWG identified several social indicators currently not included in the BioEcon package and evaluated their readiness for use in future Technical Measures EWGs.

STECF notes that a context-specific approach is required to accurately estimate the socioeconomic effects of technical measures, considering factors such as income dependence on fisheries, alternative livelihoods, and the community's cultural ties to the maritime environment. STECF acknowledges the challenges in defining fisheries communities at the fleet segment level and supports the EWG's recommendation for further social analysis and engagement with the EWG 24-05 experts to request more information on the fisheries community profiles. This should include using the fisheries community profiles from EWG 24-05 or integrating economic and stock assessment data with specific ports and communities.

STECF observes that the EWG did not define or test specific scenarios which is a crucial step in ensuring the robustness and reliability of the outcomes. Stakeholder feedback is essential in this process to enhance the validity and applicability of the results.

ToR 3 – 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 through a dedicated interdisciplinary discussion with experts from relevant Advisory Councils (ACs) and other observers to identify relevant management scenarios to assess the biological, social and economic impacts of technical measures regulation.

STECF highlights the need for the EWG to assess the impact of technical measures, particularly changes in gear selectivity, by comparing each scenario to its baseline rather than to other scenarios. Furthermore, both experimental and standard gear parameters should be made available to calculate differences in selectivity and to adjust for catchability, enabling the conversion of length-based differences into age-based selectivity changes.

STECF emphasizes the need for realistic quota assumptions in models like the Bay of Biscay model. The full implementation of the landing obligation assumption often misrepresents fishing dynamics because some fleets do not tend to cease fishing once the first quota is exhausted, overestimating choking effects. Therefore, distinguishing quota- from size-based discards could improve accuracy of the results obtained with this model.

STECF notes that the EWG highlighted that mixed fisheries scenarios should explore a broader range of impacts (e.g. excluding limiting species), rather than aiming for exact predictions.

STECF notes that the selectivity improvements often lead to short-term losses, with potential long-term gains that may benefit society rather than individual fishers. Consequently, the decision to adopt gears that are more selective depends on how confident fishers are in future gains. Moreover, not all vessels will experience the same effects as impacts vary by fleet segment and fishing area. Analysing the socio-economic impacts across different scenarios can help identify when long-term gains are likely to be realized and should also consider distributional differences, providing clearer insights for decision-making.

ToR 4 - Discuss direction of future work, additional needs, stakeholder engagement, and advice needs. These discussions will include the development of longer-term forecasts; assessments on the impacts of spatial and temporal closures, and inclusion of social data.

STECF notes that the EWG outlined short-term and long-term steps for operationalizing the application. As a first priority, the continuation of the two case studies will focus on refining short-term projections over the next year before transitioning to the development of a medium- to long-term forecast application over the following two years. Throughout this process, the EWG considered key technical requirements, including establishing a permanent dissemination platform, ensuring BEMTOOL's compatibility with updated R versions, and coding economic data estimation in R. Additionally, efforts should be directed toward converting models to length-based data, integrating social data, extending selectivity analysis to multiple species, and addressing uncertainty.

STECF conclusions

STECF endorses the outcomes of EWG 24-16 presented during STECF PLEN 25-01 and concludes that all ToRs were appropriately addressed.

STECF acknowledges the significant progress made in developing a decision support tool to assess and visualise the short-term bioeconomic impact of technical measures. The EWG successfully integrated the data and tools into the framework proposed by EWG 23-15, and demonstrated its functionality through two case studies.

STECF emphasizes that a user-friendly decision support tool for testing scenarios via a trade-off matrix remains the goal, with accessibility and understandability for both policymakers and stakeholders being key to effective decision-making.

STECF concludes that the next step forward should be to further advance the short-term forecast application for the two case studies within the next year before assessing longer-term impacts. A key aspect of this advancement is scenario testing, which is essential for defining clear objectives and ensuring the reliability of outcomes, with stakeholder feedback playing a key role in this process. Additionally, ongoing efforts should focus on establishing a permanent dissemination platform, converting models to length-based data, extending

selectivity analysis to multiple species, addressing uncertainty, and integrating social data as part of a work in progress.

STECF concludes that to progress on the integration of the social data, there is a need to further explore the social data beyond the AER framework. More importantly, a thorough understanding of the social indicators is needed by establishing thresholds or identifying value changes. This process is challenging due to the absence of a time series for social data and requires the involvement of social scientists.

5.2 EWG-24-09: VMEs socio-economic impact assessment

Request to STECF

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

STECF comments

EWG 24-09 on VMEs socio-economic impact assessment, met online 3-7 of March 2025, with the objective to discuss and assess the socio-economic impacts of area closures for deep-sea fishing (VMEs). The request to the EWG was split into six TORs:

TOR 1: Provide an overview of the process to date, what has been done, what has been achieved, and what is required to analyse socio-economic impacts of the closures of the VMEs.

TOR 2: Provide a description of the fleets operating in deep waters, with a special attention to those affected by the closures of the VMEs

TOR 3: Provide a summary of fleet behaviour using Fisheries Dependent Information database (FDI), before and after the closure (2022 - 2023).

TOR 4: Provide a summary of the spatio-temporal modelling completed to assess the impact of displacement on the fleet.

TOR 5: Provide a summary of the provided information on ecosystem services evaluation regarding deep-sea ecosystems and include especially information on the monetary values of ecosystem services.

TOR 6: Discuss direction of future working case of new similar requests, including preparatory work and data needs as well as process streamlining.

TOR 1: Provide an overview of the process to date, what has been done, what has been achieved, and what is required to analyse socio-economic impacts of the closures of the VMEs.

STECF notes that this EWG is part of the ongoing process to provide assessment of socio-economic impacts of the closures of the VMEs. The process which began in early 2024, includes a literature review, an analysis based on the DISPLACE model, additional FDI data analyses and feedback from stakeholders.

STECF notes that the EWG 24-09 followed the protocol for impact assessment processes developed in 2010 (STECF 2010). This included the organisation of a scoping meeting in February 2024 where Member States expressed their preference that STECF should perform additional analyses on socio-economic impacts, rather than the Member States themselves.

STECF notes that several meetings with Advisory Councils (NWWAC and SWWAC) were organised leading up to the EWG to explain the STECF process and to collect additional information on socio-economic impacts of the VME closures from members of the ACs. STECF further notes that the EWG received information and reports as input to the meeting. These included a literature review which revealed a scarcity of national and regional studies on the socio-economic impacts of VME closures. This information further revealed a lack of detailed data on small-scale fisheries, particularly from Portugal.

STECF further notes that many data sources were made available to the EWG. These included data from VMS, electronic logbooks, first sale sheets and the Annual Economic Report (AER). Other data sources were also consulted by the EWG, such as the Regional DataBase and Estimation System (RDBES) from ICES, to obtain the catch ratio, and the EU Fleet Register to identify vessels with and without licences for deep-sea fishing. Furthermore, a DISPLACE model conditioned for this study was also made available to the EWG.

TOR 2: Provide a description of the fleets operating in deep waters, with a special attention to those affected by the closures of the VMEs

STECF notes that the EWG provided a detailed description of fishing fleets and impacted fleet segments for France, Ireland, and Spain but not for Portugal. This was due to a lack of expertise in the EWG on the Portuguese fleet structure and of possibly impacted fleet segments. In Germany only one segment with two vessels are affected, therefore, the EWG decided not to provide a fleet overview and details on this fishery.

STECF notes that in the Spanish regional analysis other closures scenarios beyond the current closures were assessed. Therefore, the regional fleet description for Spain is focused not only on those vessels impacted by the current closures but also on those fleets that could be potentially affected.

STECF notes that according to the EWG, 73 vessels in Ireland are affected by VMEs of which 50 are currently active (2025). For France and in Spain, approximately 60 and 221 vessels per year have been present in the VMEs, respectively.

TOR 3: Provide a summary of fleet behaviour using Fisheries Dependent Information database (FDI), before and after the closure (2022 - 2023).

STECF notes that the EWG received an analysis conducted by an ad hoc contract that summarised the impact of the VME closures in 2023 within supra region 27 for five Member

States: France, Germany, Ireland, Portugal, and Spain. The ad hoc analysis was performed using the Fisheries Dependant Information (FDI) dataset.

STECF notes that the resolution of the FDI data (0.5x0.5 degrees) is not at the level of VME polygons (c-square 0.05x0.05 degrees), and that there are other effects that could have an effect on the socio-economic impact of the closures (e.g. fleet size, costs, markets or fishing opportunities). STECF further notes that VMEs are small compared to the fishing areas and a vessel can therefore operate in more than one VME polygon in one single fishing operation.

By analysing the FDI data the EWG observed a substantial decrease of effort in statistical rectangles which contain polygons selected for closures to protect VMEs. As regards the fishing activity of bottom contact gears in 2023, in comparison to 2022: -16% in fishing days, -20% in landings and -11% in value. This reduction was linked to fleets from France, Germany, Ireland and Spain and confirmed by the stakeholders. However, for Portuguese fleets, a substantial increase of fishing effort was detected, which was not corroborated by the stakeholders.

STECF notes that the reduction in effort and landings cannot be considered as a final outcome of the analysis. However, STECF emphasise that the majority of the results obtained by the analysis of the FDI data were confirmed by the different stakeholders consulted, both in interviews previous to the EWG and by those that participated as observers in the EWG. This included for example the switch to bottom set gillnets in parts of the Spanish small-scale fleet.

STECF considers that to disentangle the effect of the VMEs closure from other factors, the change in activity of the selected fleets in the statistical rectangles with closures could be compared to the change in activity in other areas (to identify whether effort was displaced or the fleet simply decreased its activity). In addition, the level of activity of the selected fleets could also be compared to the activity of similar fleets operating outside of the VMEs areas (to identify whether the change in activity is linked to the VMEs at all).

TOR 4: Provide a summary of the spatio-temporal modelling completed to assess the impact of displacement on the fleet.

STECF notes that ad hoc contracts have been issued to run the DISPLACE model and the results were provided to the EWG. DISPLACE is an open source spatial model to assess the impact of changes in fishers' behaviour and effort displacement. The EWG discussed this model and considered it as a suitable model to assess the displacement effects of the closures of the VMEs. However, the EWG also highlighted how some improvements of the modelling exercise will be required. In particular, the EWG highlighted the following required improvements:

a) Enabling DISPLACE modelling features:

• Account for fish species spatial distribution (e.g. hake), e.g. from fisheries-independent surveys or preferred habitat modelling;

• Account for an effort concentration effect (“crowding effect”), which is two folds: i) productivity on the affected areas whenever more effort occur locally, ii) mutually exclusive fishing activities among gears that decrease the attractiveness of certain fishing grounds (also if there are “tacit rules” among fishers in sharing the marine space);

• Cumulative effects with other regulations (such as quotas, technical measures, etc.);

• Include a layer of type of sea-floor habitats (e.g., hard substrates or rock) or other geological elements distribution that define natural 'closure' areas for certain fishing gears such as trawlers;

• Further inform the population dynamics based on life history traits for simulation to capture long-term changes in stock productivity that influence future economic outcomes.

b) Data preparation and results reporting:

• Quality controlled representative baseline data is an essential pre-condition to inform any modelling exercise to ensure that the modelled estimates are scaled to the system being modelled, in particular when the outcomes are being used to produce management advice. During the EWG 24-09, experts attempted to validate the model input data supplied by the ad hoc contract. Based on this validation exercise, a number of potential sources of bias in the fleet data preparation arising from input data quality issue were identified:

– Landings and effort mismatch: very common in fleet data and methodology required to reallocate.

– Gear subset: Diverse list of gears in RDBES not accounted for (i.e. one gear in legislation maps to a number in RDBES).

– Effort assumption: DISPLACE simulates fishing hours. Therefore days at sea need to be converted, using conversion factors that may be obtained by type of fishing activity depending on input data. In the current run, the model uses 6 effective hours of effort per vessel per day.

– AphiaID: likely a different species mapping list per Member State has resulted in difference of grouped species named (i.e. MON, ANF, MNZ), which are target species in this area and will impact catchability.

In addition to efforts to enhance data input, the EWG recognized that a major source of uncertainty stems from fleet behaviour and its complex interplay with price dynamics, stock fluctuations, and management responses. To address this, dynamic models should complement data-driven approaches, enabling the exploration of "what-if" scenarios.

TOR 5: Provide a summary of the provided information on ecosystem services evaluation regarding deep-sea ecosystems and include especially information on the monetary values of ecosystem services.

STECF notes that EWG 24-09 is the first EWG where ecosystem services and their valuation played a role.

STECF notes that conservation of ecosystem biodiversity (functional and taxonomic) is a beneficial action for society and is crucial to halt and reverse biodiversity loss under the Convention of Biological Diversity, other international agreements and the EU Biodiversity Strategy for 2030. High biodiversity levels offer a higher resilience of ecosystems to climate change through the provision of complex structures and diverse species assemblages which, in turn, can help to maintain ecosystem function in the face of disturbance or change. Therefore, high biodiversity levels favour relative continuity of the linked services and potentially lower the adaptation needs to future possible abrupt changes in environmental conditions.

STECF notes that the EWG identified different ecosystem services provided by the VMEs, and obtained that some studies show how, for example, its role in carbon sequestration outweighs the value of abiotic resources extracted from the deep sea.

STECF notes that, because most deep-sea ecosystem processes are long-term, most benefits from protecting VMEs are also long-term.

STECF notes that the existence of the Deep-sea Access Regulation and the implementation of protected area networks shows that society recognized the value of the ecosystem services provided by VMEs.

STECF notes that relatively few studies have assessed the monetary value of deep-sea ecosystem services, and some evaluation methods remain controversial. Although economic valuation of these benefits could provide valuable insights for stakeholders, the inherent complexity of the valuation of the services limits a monetary valuation to be carried out.

TOR 6: Discuss direction of future working case of new similar requests, including preparatory work and data needs as well as process streamlining.

STECF notes that the EWG discussed the way forward on how to address socio-economic impact analysis of the VMEs and concluded that it could be improved through a three steps process. The first step should consist of identifying possible gaps or inconsistencies in the data and discussing the assumptions to be made. In a second step, the application of the model should l be performed, and the first results will be evaluated providing feedback to finalise the conditioning of the model. In a third step, the final results obtained would be

analysed and conclusions on the socio-economic impact of the evaluated measures would be drawn.

STECF notes how the participation of stakeholders as observers during EWGs facilitates the interpretation of data and results. STECF further notes the difficulties in obtaining the required data to perform this analysis for small scale fisheries.

STECF conclusions

TOR 1: Provide an overview of the process to date, what has been done, what has been achieved, and what is required to analyse socio-economic impacts of the closures of the VMEs.

STECF concludes that the assessment of the impacts of VMEs on fishing fleets is an ongoing process to which the EWG 24-09 has collated data from different sources to provide preliminary results.

STECF concludes that the engagement of stakeholders in the process of assessing the socio-economic impacts of VMEs is crucial, given that it supports a transparent, inclusive and ongoing process. Furthermore, the input from the stakeholders helps identifying the impacts of closures at different spatial and fleet levels, such as loss of income or shifts in the fleets behaviour facing their constraints.

TOR 2: Provide a description of the fleets operating in deep waters, with a special attention to those affected by the closures of the VMEs

STECF concludes that it is important to obtain a description of the Portuguese fleets impacted by the VMEs. STECF further concludes that it is necessary to distinguish between the fleets impacted by the current closures and those that could be potentially impacted on other closure scenarios, as including the latter will overestimate the real impact of the closures.

TOR 3: Provide a summary of fleet behaviour using Fisheries Dependent Information database (FDI), before and after the closure (2022 - 2023).

STECF concludes that although the values obtained by the FDI data analysis cannot be considered as a final assessment of the impact of the closures of the VMEs, they provide valuable information on regional trends in fishing behaviour, that in many cases were further validated by the stakeholders consulted.

STECF concludes that the small size of VMEs compared to the whole fishing area hinders any robust assessment of the economic impact of the closures, specially considering that a fishing vessel can fish in more than one closed area in the same fishing operation.

STECF concludes that the substantial increase of effort observed in the FDI data for 2023 for the Portuguese fleets should be reported to the DTMT for referral to the Member State and the FDI EWG.

TOR 4: Provide a summary of the spatio-temporal modelling completed to assess the impact of displacement on the fleet.

STECF concludes that the DISPLACE model is adequate for assessing the impact of the VME closures considering fishing effort reallocation, although necessary improvements regarding e.g. data availability is needed before running additional analyses in the future. Furthermore, STECF concludes that the outcomes obtained in the EWG can only be considered as part of an ongoing process.

STECF concludes that the results of DISPLACE simulations are hindered by the lack of vessel level data and this gap is reflected in the use of several assumptions. STECF also concludes that these outcomes should be interpreted in relative terms, comparatively with the baseline given the uncertainties in scaling the input data.

STECF concludes that accurate data at a high resolution is crucial to properly capture fishing patterns and impacts, which are essential for making informed policy decisions.

STECF concludes that six steps could be taken to assist in addressing the challenges regarding the DISPLACE modelling in the future. These steps have to be addressed by different actors. The four steps directly linked to the DISPLACE model application are outlined below, the two additional steps under the TOR 6:

1. WGRDBESGOV feedback: The STECF should provide feedback to WGRDBESGOV highlighting the need for an official ICES species list which maps AphiaID with FAO codes. This is also highlighting the benefit of consistency in vessel ID lists across tables, including in the Vessel Detail table. The STECF should also request the inclusion of the registration Port ID (home port) in the Vessel Detail table to enhance data completeness and interoperability to the Annual Economic Report (AER).

2. Member State Feedback to ICES: Reporting of FAO codes to RDBES, should be mandatory or an official mapping list with Aphiad ID should be supplied by ICES with the data call. Additionally the functionality of the database would be increased if all tables in RDBES used a common vessel ID. This would ensure that the vessel table (VD) could be linked to the landings (CL) and effort (CE) tables.

3. Data request by MARE to Member States: in preparation for future assessments, initiate a data request to obtain an expanded RDBES style Vessel Detail table (VD) with vessel ID that will link to CL and CE tables, detail deep water licence and home ports per year. This data request should be deigned by a data call expert. This should be discussed with Member States as this improved VD could also inform other assessments in ICES or STECF.

4. Scripted merging and QC: An ad hoc contract could be used to develop a script to assist Member States (see also TOR 6) in merging RDBES (CL, CE, VD extended to include consistent vessel ID and home port) and VMS (EFLALO and TACSAT) data to support DISPLACE parametrization and to integrate built-in quality control (QC) reports to be used by EWGs and STECF for model validation. This is independently of the decision whether Member States or STECF runs the DISPLACE model in future analyses. This script should be developed by an expert in RDBES and VMS data calls, scripts and procedures.

STECF concludes that this approach will improve the input data quality, and increase the usability of simulation results for policy-making and resource management and is, therefore, not limited to running the DISPLACE model.

TOR 5: Provide a summary of the provided information on ecosystem services evaluation regarding deep-sea ecosystems and include especially information on the monetary values of ecosystem services.

STECF concludes that the EWG report gives a comprehensive overview on the ecosystem services of deep-sea ecosystems and lists available information on economic valuation studies.

STECF concludes that, although many ecosystem services can be identified for deep-sea ecosystems, there is still several lacking sufficient information to allow for a monetary valuation to be carried out. However, due to the current inherent complexity, the small number of studies assessing the monetary value of these ecosystem services and the uncertainties when these valuations exist, the valuation of the associated services, economic valuation should not be regarded as the sole instrument for achieving their preservation. There are sufficient evidence supporting conservation efforts, and the Deep-sea Access Regulation reflect political commitment to preserving these ecosystem services.

TOR 6: Discuss direction of future working case of new similar requests, including preparatory work and data needs as well as process streamlining.

Based on the findings of the EWG, STECF proposes the following four steps process to improve any future socio-economic evaluation of the VMEs:

STEP 1. Fleet data collection

This step will focus on the collection of fleet data and a dependency analysis. Ad hoc contract(s) could be used to:

1.a Provide the format required for parametrising DISPLACE and create a script that Member States will use to prepare data similar to the formats used in the RDBES (CL, CE, VD extended) and VMS (TACSAT and EFLALO) data calls. The script will also be used to quality control of the data required to parametrise the DISPLACE model. This ad hoc

contract should also be responsible for drafting the data call letter annexes that will define the data required and give context for the data submitters.

The script should be based, at the extent of possible, on already ongoing developments At the moment there is also the Greater North Sea Basin Initiative with a similar data request to MS of what STECF would need for a further analysis of closures of the VMEs. It should be elaborated if that script could be also used for the fleet data collection with minimal adjustments which could avoid unnecessary efforts to develop a new script.

1.b This script should be tested by a national expert, and the feedback incorporated into the final data call.

1.c The data call will be launched. Afterwards, the contractor(s) should be available to address possible questions coming from the data submitters when running the script.

The outcome of this step would be a fleet dependency analysis and the fleet data required by the DISPLACE model

1.d Collate the fleet dependency analysis in a report.

STEP 2 Single species stock assessment

2a.Compile the stock assessment information (when they exist) and of all the stocks (without stock assessment), talking advantage of the existing compilation made by the STECF when performing the CFP monitoring and Balance and Capacity exercises .

2b Stock objects collected should be quality controlled for completeness by reproducing the short term forecast (i.e. in FLR). This is an essential step to ensure that cumulative errors are not reproduced in the biomass dynamics modelled in DISPLACE.

STEP 3 Parametrise, run and share outputs of DISPLACE

3a To condition the model.

3b. To run the model considering the 2022 year as the baseline year, comparing it with the 2023 situation, but also with the different ICES scenarios.

The outcome of this step would be a draft analysis of the impact of the VME closures on the economic performance of each fleet. It should be noted that this analysis can only cover fleets for which spatial data is provided under step 1.This analysis will comprise:

- an ex-post analysis of the 2022 closures (to be compared to the data provided by MS/Stakeholders)
- an ex-ante analysis of the future VME closures (scenarios C, D and E) to anticipate impact on the fleets.

STEP 4. EWG

4.a Conduct an EWG in where inputs from the different stakeholders should be included. To facilitate the incorporation of these inputs, a template should be created by the chairs of the EWG before the meeting. To avoid any different playing level, in this template the fleets should be classified as “affected”, “not affected” or “potentially” affected by the VMEs.

4.b. Considering these inputs but also the results from STEP 3 a final economic evaluation should be discussed by the group.

4.c If unresolvable data issues are detected, for any fleet and in particular for the small scale fleet this should be assessed, to the extent as possible, using the available regional studies.

The outcome of this step will be the economic impact of the fleets affected by the VMEs to be reviewed by the STECF.

STECF concludes that whether these steps are followed or not, future analyses on this topic should adhere to FAIR principles (Findable, Accessible, Interoperable, Reproducible) by ensuring that the ad hoc reports and EWG reports provide reproducible frameworks, including instructions, data sources, and implementation guidance. Furthermore, results should include contextual details such as total input tonnage/effort and fleet coverage to enhance transparency. STECF concludes that these two final steps should follow the approach taken in other EWGs conducted by STECF and in particular the Technical Measures Regulation EWG.

5.3 EWG 25-01: Methods: Stock assessments in the Western Mediterranean Sea 2025

Request to STECF

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

Summary of the information provided to STECF

STECF was provided with the draft report of the EWG. A presentation of the outcomes and logistic problems of the EWG was made by the chairs.

STECF comments

The STECF Expert Working Group (EWG 25-01) met at the Joint Research Centre (JRC) in Ispra, Italy, 3-7 March 2025. A total of 21 experts participated at the meeting, including one STECF member and six JRC experts.

The EWG was tasked to update and streamline: ToR 1) a number of data preparation decisions and routines; ToR 2) stock assessment methodologies.

STECF notes that several references are made to a benchmark process in these comments. This term does not refer to any specific process, such as those of ICES or GFCM. Instead, it is used in a more general sense, referring to the process that supports stock assessment scientists in making relevant decisions about the assessment models and the short-term forecasts, among others. These decisions are not intended to change every time the stock is assessed, in order to maintain the stability in the assessment process. Different types of benchmark process can be designed, which should be discussed and agreed upon by STECF.

STECF notes that the quality and consistency of data transmitted through the Mediterranean and Black Sea (MEDBS) data call (e.g. catch at age, landings and discards by length, biological data and surveys data) were evaluated by ad hoc scripts developed within the QualiTrain project (Quality checking of Mediterranean & Black Sea data and training for Member State experts, CINEA/EMFAF/2021-3.1.2-02-SC03), to provide a report to ensure that any quality and/or coverage issues will be reported in the Data Transmission Monitoring Tool (DTMT).

STECF observes that the EWG defined a series of guidelines to address data gaps in Length Frequency Distributions (LFD) time series or scientific surveys (e.g., missing metiers or missing years). STECF notes that as no single approach applies universally, the expert's knowledge is essential in determining the best approach to be applied on a case by case basis. Furthermore, the EWG considered that for the sake of transparency, the selected approach to address data gaps, should be fully documented and justified.

STECF notes that the evaluation of the requirements to correct the t0 parameter would best be done for each stock and growth model in the context of a benchmark process. The EWG proposed two different approaches to check the need for a t0 correction: 1) a first method

that visually compares the length at the transition between ages 0 and 1; 2) and a second method, which is more analytical, that allows to determine how much t0 should be increased, based on the consistency of the cohorts.

STECF observes that the EWG explored different empirical methods for estimating Natural mortality (M) based on the information of the biology and ecology of the species. A methodology, based on an operating model simulation, was developed to assess the robustness of the different M models in the stock assessment process. STECF agrees with the EWG that this approach could help to select the most robust M model.

STECF observes that the standardized approach and script developed to explore the consistency of the cohorts are useful tools to evaluate the slicing process and growth parameters assumed. In addition, they can help to identify possible assessment model configurations.

STECF observes that a revised approach to standardize the estimation of F-at-age by gear/GSA was developed within the FLR framework. STECF considers that the developed ad-hoc script should be used during the stock assessment EWG in order to deliver the F-at-age by gear/GSA matrices to the EWG on *"Fishing effort regime for demersal fisheries in West Med"*.

STECF notes that a general framework for setting up rules for the short-term forecasts has been defined, but that these decisions should be taken as part of a benchmarking process.

STECF observes that to evaluate the assessment model performance, a set of diagnostics were described and coded during the EWG. The diagnostics help to identify model misspecifications and poor fits. The following diagnostics were proposed: 1) Residuals analysis for catch-at-age and abundance indices at age; 2) Goodness of fit (based on likelihood, AIC and BIC); 3) Runs test for indices and age compositions; 4) Prediction skills methods; 5) Retrospective analysis and Mohn's rho value to check the stability of the assessment. STECF acknowledges that, while these diagnostics provide objective measures, the final decisions are commonly based on expert judgement.

STECF notes that developed methods are coded in R and R Markdown files, facilitating reproducible analysis. A suite of scripts compiling all the methodologies developed will be made accessible and distributed internally to STECF EWGs. An R package may also be built by JRC to facilitate the distribution and use of these scripts. In such case, a maintenance framework for the package shall be set up by JRC.

STECF notes that the TAF (Transparent Assessment Framework) is a standardized methodology developed by ICES to ensure reproducible, transparent, and well-documented stock assessments. In the medium-term, this approach could be tested for Mediterranean stock assessments offering significant advantages in terms of workflow efficiency. This medTAF framework would require to maintain a repository, including version control, issue tracking, and updates.

STECF observes that the methods developed by the EWG were tested using exercise datasets. A full endorsement of these requires additional testing validation with real assessments**. STECF su**ggests that the forthcoming STECF EWG 25-06 incorporates these tools to conduct analyses for European hake in the Western Mediterranean with potential applicatio**n to future stock assessments and benchmarks.**

STECF conclusions

STECF endorses the outcomes of EWG 25-01 presented during STECF PLEN 25-01 and concludes that all ToRs were appropriately addressed.

STECF concludes that the new and revised scripts should be used in the EWG West Mediterranean Stock Assessment (EWG 25-09) and other related EWGs with assessment of West Mediterranean stocks.

STECF concludes that the methods developed by EWG 25-01 for the evaluation of t0 and natural mortality, and setting up of short-term forecasts should be used within a benchmark processes. The approaches for filling data gaps, checking cohort consistency, estimating partial fishing mortality, and running diagnostics should be included in the yearly stock assessment process.

STECF concludes that the transparency and accessibility of the methods could be enhanced through the creation of a dedicated R package with clear documentation to support stock assessment EWGs.

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

6.1 Update of the STECF EWG 24-17 report using the updated VUR indicators for the FR OMR fleet segments

Background provided by the Commission

The Commission launched an ad hoc contract for two experts for updating the STECF EWG 24-17 report to include the VUR and VUR90 technical indicators in the assessment of balance for the French fleet segments in the outermost regions. The outcome of the adhoc contract will be made available to STECF prior to the plenary meeting.

Background documents are published on:

https://stecf.ec.europa.eu/meetings-calendar/past-meetings

Request to the STECF

The STECF is requested to comment on the outcome of the adhoc contract, more specifically on the updated traffic light table(s) and sections of report EWG 24-17.

Summary of the information provided to STECF

STECF received the reports of the ad hoc contracts 2516 and 2517, which comprised the following documents:

1. STECF-24-17 Balance capacity report - OR JRC140743
2. Traffic light table (1).xlsx
3. Report FR OFR VUR update (ad hoc).pdf
4. The French national fleet report (as submitted by France in 2024).

STECF comments

The preparation of a revised version of the EWG 24-17 Balance Capacity report is clearly an unprecedented departure from established procedures which has placed additional demands on an already challenging agenda for all parties concerned. There is a an agreed process by which data should be provided by Member States in response to data calls issued by DG MARE under the DCF and STECF is of the opinion, that the data submitted under such data calls and transmitted to STECF or its Expert Working Groups (EWGs), should be considered final.

STECF notes that the revised fleet segment-specific indicator values for the technical indicators VUR and VUR90 provided by the JRC were based on data resubmitted by the French authorities in February 2025 for French fleet segments in the French outermost regions (ORs). The data submission was in response to an ad hoc request from the

Commission. The reason for the request was that the EWG 24-17 was unable to provide meaningful estimates of the Vessel Utilization Ratios (VURs) for French OR fishing fleet segments due to unresolved data issues with data submitted by France in 2024 under the Fleet Economic data call. Specifically, the data issues were related to the fleet segment values for MAXSEADAYS. Hence, such values for these segments were not included in the EWG 24-17 report.

STECF notes that as requested by the Commission, the reports of the ad hoc contracts fully addressed the following three tasks:

1. Review the updated VUR and VUR90 calculations for the French fleet segments in the outermost regions, as provided by the JRC.
2. Compare the calculated VUR90 provided by the JRC with the VUR90 provided in the French fleet report.
3. Update the relevant text sections and the traffic light table provided by the JRC of the EWG 24-17 report, to reflect the revised VUR and VUR90 values.

The contractors addressed all tasks and provided a re-draft of the EWG 24-17 Balance Capacity report incorporating updated values for VUR and VUR90 for French fleet segments in the ORs for the year 2022. The re-draft included values for VUR and VUR90 in the traffic light tables (Table 3.3.1.1 and Table 4.3.1) and appropriate revisions to the relevant associated text of the report, all of which were marked with tracked changes. STECF reviewed the contract reports and the amendments in the re-draft and after minor editorial changes to the proposed text, a revised version of the EWG 24-17 report was finalised and agreed. The revised report will be published in the usual manner and clearly marked to supersede the STECF 24-17 report.

STECF notes that in the revised data submission in 2025 for the year 2022, there were 28 vessels fewer in the VL0010 fleet segments of Guadeloupe compared to the number of vessels reported to the EWG 24-17 in 2024 (see table below).

Table 6.1.2. Numbers of vessels reported in the VL0010 fleet segments of Guadeloupe for the year 2022.

	Number of vessels	
Segment	**EWG 24-17 (2024)**	**FRA ad hoc submission (2025)**
FRA OFR FPO VL0010 GP	62	47
FRA OFR HOK VL0010 GP	68	61
FRA OFR PGP VL0010 GP	79	73

Source: France data 2024 and 2025 submissions for the year 2024, EWG-24-17 and own elaborations.

The response to an informal enquiry to IFREMER scientists indicates that such differences may be due to the fact that the 2024 data submission concerned all vessels from Guadaloupe and Saint Barthélemy while the 2025 revised submission relates to Guadaloupe only, as Saint Barthélemy does not fall within the same provisions of the CFP. STECF notes that as the number of vessels changed in the revised data submission from France for these segments, the VUR and VUR90 indicator values are derived from data from fewer vessels than the data used for deriving the economic and biological indicators.

STECF notes that calculation of the VUR and VUR90 indicators for former fleet segments that have been split into two different sub-segments to reflect the level of activity of the constituent vessels (one containing the most active vessels and a second containing the least active vessels), raises important considerations with respect to their interpretation. First and foremost is that both VUR and VUR90 indicators show a much higher vessel utilisation rate for the two sub-segments than the value that arises if the indicator values are calculated for the single segment. Such an outcome needs to be taken into account when interpreting the indicator values for VUR and VUR90 and any associated policy implications.

For the above segments, the VUR and VUR90 values in the revised EWG 24-17 report and the coloured shading in the traffic light tables (Table 3.3.1.1 and Table 4.3.1) are based on the numbers of vessels listed in the 2025 revised submission. However, as also stated above it is important to note that in the report, the values for all other indicators are based on the vessels listed in the 2024 submission in response to the 2024 Fleet economic data call.

Issues identified regarding the VUR and VUR90 indicator calculations

In Guadeloupe, Martinique, La Réunion and Mayotte, there are 1, 3, 3, and 1 fleet segments, respectively, that consist of a single vessel. For such fleet segments, the VUR and VUR90 indicators always indicate that such segments are in balance with respect to such indicators as the maximum number (or 90th percentile) of the days-at-sea is always equal to the average number of days-at-sea of that fleet segments concerned, resulting in a VUR or VUR90 indicator value of 1. Hence, reporting VUR or VUR90 = 1 is the correct calculation but in such cases the indicator value cannot be considered informative.

Comparison between the VUR and VUR 90 indicator values computed using the revised data submission with those in the French Fleet report submitted in 2024.

A comparison between the VUR and VUR90 indicators submitted in the French fleet report and those calculated by the JRC based on the revised data showed a very high similarity and none of the minor differences identified affected the interpretation of the technical indicators.

STECF conclusions

The preparation of the current revision of the EWG 24-17 Balance Capacity report, due to the incorrect submission of data from one Member State, is an unprecedented departure from established STECF data handling procedures and processes. It is undesirable, adds undue pressure to all parties involved and potentially could undermine the credibility of agreed data submission deadlines and of the STECF process. Based on the review of the reports from the ad hoc contractors, the STECF concludes the following:

1. *Review the updated VUR and VUR90 calculations for the French fleet segments in the outermost regions, as provided by the JRC.*

The updated values were reviewed and issues were identified regarding a change in the numbers of vessels for three fleet segments in Guadaloupe, meaning that the VUR and VUR90 indicator values for the segments FRA OFR FPO VL0010 GP, FRA OFR HOK VL0010 GP and FRA OFR PGP VL0010 GP, are derived using data from fewer vessels than the biological and economic indicators. The fleet segments concerned are identified in the traffic light tables in the revised report EWG report.

2. *Compare the calculated VUR90 provided by the JRC with the VUR90 provided in the French fleet report.*

A comparison between the VUR and VUR90 indicators submitted in the French fleet report and those calculated by the JRC showed a very high similarity and none of the minor differences identified affected the interpretation of the technical indicators.

3. *Update the relevant text sections and the traffic light table provided by the JRC of the EWG 24-17 report, to reflect the revised VUR and VUR90 values.*

Relevant updates and amendments to the STECF 24-17 report reflect the VUR and VUR90 indicator values and associated tables and text have been made, based on the data for 2022 resubmitted by the French authorities in February 2025. The original STECF 24-17 report is henceforth retracted and is replaced by an updated new edition.

6.2 Assessment of the Joint Recommendation of the South-WesternWaters High-Level Group, aiming to exclude all bottom gears except the longliner "piedrabola" to operate in certain VMEs areas established in Commission implementing Regulation (EU) 2022/1614

Background provided by the Commission

Pursuant to the Deep-sea access regulation (EU) 2016/2336, a list of 87 areas where Vulnerable Marine Ecosystems (VMEs) occur or are likely to occur has been established by Implementing Regulation (EU) 2022/1614(1). The Deep-sea Access Regulation provides that below a depth of 400 meters all bottom gears shall be prohibited in all areas listed.

Council Regulation (EC) No 734/2008 provides for all definitions relating to the Deep-sea Access Regulation, namely:

- **bottom gears** are described as *"'bottom gears' means gears deployed in the normal course of fishing operations in contact with the seabed, including bottom trawls, dredges, bottom-set gill nets, bottom-set longlines, pots and traps*",
- **vulnerable marine ecosystems** are "*any marine ecosystem whose integrity (i.e. ecosystem structure or function) is, according to the best scientific information available and to the principle of precaution, threatened by significant adverse impacts resulting from physical contact with bottom gears in the normal course of fishing operations, including, inter alia, reefs, seamounts, hydrothermal vents, cold water corals or cold water sponge beds. The most vulnerable ecosystems are those that are easily disturbed and in addition are very slow to recover, or may never recover*"
- **significant adverse impacts** (SAIs) are defined in line with the FAO Guidelines of 20092 as "*impacts (evaluated individually, in combination or cumulatively) which compromise ecosystem integrity in a manner that impairs the ability of affected populations to replace themselves and that degrades the long-term natural productivity of habitats, or causes on more than a temporary basis significant loss of species richness, habitat or community types*."

Article 9(6) of the Deep-sea Access Regulation foresees the **removal of areas** from the established list of VMEs areas "*on the basis of an impact assessment*" and *"after consulting the competent scientific advisory body"* provided that "*appropriate conservation and management measures have been adopted which* ***ensure that significant adverse impacts on VMEs in that area are prevented***".

(1) Commission Implementing Regulation (EU) 2022/1614 of 15 September 2022 determining the existing deep-sea fishing areas and establishing a list of areas where vulnerable marine ecosystems are known to occur or are likely to occur

(2) FAO (2009) International Guidelines for the Management of Deep-sea Fisheries in the High Seas

Background documents are published on:

https://stecf.ec.europa.eu/meetings-calendar/past-meetings

Request to the STECF

The STECF is requested to carry out an assessment of the conservation and management measure proposed by the Joint Recommendation which is the reintroduction of the longliners "*Piedra bola*" into 11 VMEs areas, with a view to determine if this measure ensures that significant adverse impacts on VMEs in those areas are prevented or indeed whether SAIs do not occur according to the type of gear, described as semi-pelagic longliner in the JR and scientific reports submitted. This assessment should be made in line with the criteria set in the **Deep-sea Access Regulation (EU)2016/2336 framework** and based on the evidence provided by the results of the scientific projects ISPAMER (2023-2025) and PALFON-EMV Project (2023-2025).

The STECF is furthermore requested to assess the compatibility of the proposed measure with the objectives and conditions set out in **Article 12(3) and (4) of the Technical Measures Regulation (EU) 2019/1241**, in particular: (i) whether the proposed measure is compatible with the objectives of Article 2 of the CFP, (ii) whether the proposed measure is as stringent as current measures under Union law and (iii) whether the proposed measure ensures that the environmental impacts of fishing activities on seabed habitats are in line with point (j) of Article 2(5) of Regulation (EU) No 1380/2013, which is to be coherent with the Union environmental legislation, in particular with the objective of achieving a good environmental status by 2020 as set out in Article 1(1) of Directive 2008/56/EC, as well as with other Union policies.

In details:

1) Assessment pursuant to the Deep-sea access regulation framework

The STECF is required to review the suitability and potential effectiveness of the proposed conservation and management measure, which is to allow the reintroduction of the longliners "Piedra Bola" into 11 VMEs closed polygons and to take over the ban for all other bottom gears in those 11 VMEs areas, in ensuring that significant adverse impacts3 on VMEs in those areas are prevented.

In doing so, STECF is requested to carry out an assessment of the proposed conservation and management measure based on the **review** of the evidence provided in the projects ISPAMER (2023-2025) and PALFON-EMV Project (2023-2025), developed by the Spanish Institute of Oceanography (IEO), in line with the **seven points requirements of the FAO Guidelines**, para. 47, as prescribed by

3 Article 2: "'*significant adverse impacts' means impacts (evaluated individually, in combination or cumulatively) which compromise ecosystem integrity in a manner that impairs the ability of affected populations to replace themselves and that degrades the long-term natural productivity of habitats, or causes on more than a temporary basis significant loss of species richness, habitat or community types*."

article 9(4) and 9(6) of the Deep-sea Access Regulation. For this, the STECF can rely on the ICES advices on the list of areas where VMEs occur or are likely to occur (2021, 2022, 2023, 2024).

Furthermore, STECF is requested to compare the impact of the Piedra bola against the impact of bottom trawls and to this end may refer to the study by Pham et al. (2014) "Deep-water longline fishing has reduced impact on Vulnerable Marine Ecosystems" published in Nature in April 2014, which estimated that the impact of bottom trawling on deep-water corals and sponges on seamounts in the Northeast Atlantic is likely to be 296 to 1,719 times higher than the impact of deep-sea longline fishing.

2) Assessment pursuant to Article 12 of the Technical Measures Regulation
STECF is requested to assess compatibility of this proposed measure with the **objectives and conditions set out in Articles 12(3) and (4) of Regulation 2019/1241**.
Such measures shall be compatible with the objectives of Article 2 of Regulation (EU) No 1380/2013, be at least as stringent as measures under Union law, and ensure that the environmental impacts of fishing activities on seabed habitats are in line with point (j) of Article 2(5) of Regulation (EU) No 1380/2013 ("be coherent with the Union environmental legislation, in particular with the objective of achieving a good environmental status by 2020 as set out in Article 1(1) of Directive 2008/56/EC, as well as with other Union policies".)

Key Documents and References

- Joint Recommendation of the South-Western Waters High-Level Group aiming to exclude the longliner "piedrabola" from the prohibition to operate in certain VMEs areas, established in Commission implementing Regulation (EU) 2022/1614 + Annexes and References
- FAO (2009) International Guidelines for the Management of Deep-sea Fisheries in the High Seas
- ICES. 2024. Advice on areas where Vulnerable Marine Ecosystems (VMEs) are known to occur or are likely to occur in EU waters.
- ICES. 2023. Advice on areas where Vulnerable Marine Ecosystems (VMEs) are known to occur or are likely to occur in EU waters.
- ICES. 2022. EU request for a Technical Service to provide data output of the ICES 2021 advice on the deep-sea access regulation (ref. (EU)2016/2336) as coordinates for EU waters area only.
- ICES. 2021. EU Request to advise on the list of areas where VMEs are known to occur or are likely to occur and on the existing deep-sea fishing areas (ref. (EU)2016/2336).

Summary of the information provided to STECF

STECF was provided with the Joint Recommendation (JR) and background documents collated by DG MARE:

- *The JR of the South Western Waters High-Level Group*

The JR contains the South Western Waters High-Level Group proposal to permit the use of the Piedra bola bottom set longline (Piedra bola longline) to operate in 11 VME areas, established in Article 2.1 of the Commission implementing Regulation (EU) 2022/1614. The specific measure proposed in the JR is to exclude the Piedra bola longline gear from the list of prohibited gears in some of the VME boxes established by (EU) 2022/1614.

The JR argues that fishing activities with the Piedra bola longline have been recorded by VMS in these VME areas before the current fishing prohibition was implemented and that the Peidra bola longline had no impact on such VMEs.

Specifically, the JR proposes to amend Annex II of Regulation (EU) 2019/1241 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures related to the section "Closed areas for the protection of sensitive habitats" as follows: *"It shall be prohibited to deploy bottom gears below a depth of 400 meters, including bottom trawls, bottom set gillnets and bottom set longlines, except for the longliner type 'piedrabola'"*. The JR further calls for including the technical specifications of the Piedra bola longline in the technical measures Regulation (EU) 2019/1241).

11 VME boxes are referred to in the JR: POL 14, 15 (ICES 9a - Portuguese coast), 18 (ICES 9a – North Spain) and POL 16, 17, 20, 22, 23, 25, 26, 28 (ICES 8c), as defined in Implementing Regulation (EU) 2022/1614.

The JR is based on the projects ISPAMER (2023-2025) and PALFON-EMV (2023-2025), which aimed at providing scientific evidence of the likely impact of the Piedra bola longline on the seabed where VME might occur. These projects, developed by the Spanish Institute of Oceanography (IEO) assessed the possible impact and bycatch of the Piedra bola longline targeting hake in Western waters.

The JR has the following 11 annexes:

- *ANNEXES - JR on Piedra bola vf*

Annex 1. Valeiras, J. M. Barreiro, J.C. Fernández and E. Abad, 2024. Impact and selectivity of semipelagic longline targeting hake in European Atlantic waters. Technical Report of the ISPAMER2 project (year 2024).

Annex 1 contains a report from a study on the gear selectivity of the Piedra bola longline (referred to as a semi-pelagic longline). Observations were carried out on board seven Piedra bola longline vessels from July to December 2024, with a total of 10 effective fishing trips with a total number of fishing sets (sampled hauls) of 343.

Annex 2. Valeiras, J. M. Barreiro, J.C. Fernández and E. Abad, 2024. Study of the interaction of semipelagic longline fishing in the Gran Sol fishing ground with vulnerable marine ecosystems. Technical Report of the PALFON-EMV project in 2024.

This document presents the observations that were carried out on board the vessel Aveneira in October, November, and December 2024, with a total of six effective fishing trips and 87 fishing operations.

Annex 3. Executive summary on the results of the ISPAMER and PALFON Project.

This document reports on two producer organizations' participation in the two projects ISPAMER (FPO-Burela) and PALFON-EMV (FPO-Vigo), under the scientific supervision of an expert team from the IEO. These are three-year projects (2023-2025) with the aim to measure the typical catches when operating a Piedra bola longline gear, characterizing the fishing gear and obtaining information on the possible impact on the bycatch of benthic invertebrates.

The document states that the metiers considered in the DCF are LLS_DEF (bottom species) and LLS_DWS (deep species). The study argues that according to this classification, the use by the Spanish fleet of the Piedra Bola longline targeting hake would be LLS_DEF, even if it is stated that this longline would be clearly different from the one used for fishing conger eel and other bottom species.

The document further argues that a 'semi pelagic piedra bola longline metier' targeting hake should be included in the Commission Delegated Decision (EU) 2021/1167 to obtain better classified and better-quality data and be a category considered in the EU regulations.

With regard to the potential impacts of the Piedra bola longline weights, Annex 3 states the following:

"The calculation of total surfaces indicates that a fishing operation would only contact between 0.4 m2 (ISPAMER) to 0.94 m2 (PALFON-EMV) in total with the seabed. That is, a semi-pelagic hake longline with an average length of about 7 km would only contact maximum 0.9 m2 with the seabed." It is argued in the annex that the gear is semi-pelagic because the lines and the hooks are elevated from the sea bottom.

Annex 3 also states *"During electronic monitoring, some invertebrates have been registered in the hooks that reach the deepest depths and to some anchoring stones. A dedicated analysis of the videos is currently being carried out to identify the species at a taxonomic level."*

Annex 4. Figure of the traditional Piedra bola longline gear targeting hake used by the Spanish fleet (ISPAMER Project).

The annex provides a schematic picture of the deployed Piedra bola longline gear

Annex 5. Figure of the traditional Piedra bola longline gear targeting black scabbardfish used by the Portuguese fleet..

The annex provides a schematic picture of the deployed Piedra bola longline gear used by the Portuguese fleet.

Annex 6. The fishery for black scabbardfish (*Aphanopus carbo* Lowe, 1839) in the Portuguese continental slope. Pedro Bordalo-Machado, Ivone Figueiredo., Rev Fish Biol Fisheries (2009) 19:49–67.

The document states that a longline fleet targeting black scabbardfish has been fishing on the Portuguese continental slope in the south of ICES Division IXa, for more than 20 years. The study noted that fishing occurs at particular areas on the slope where individual vessels have their own fishing grounds.

Annex 7. The black scabbardfish (*Aphanopus carbo* Lowe, 1839) fisheries from the Portuguese mainland and Madeira Island. Pedro Bordalo-Machado et all. Scientia Marina 73S2 December 2009.

The document shows weekly landings per unit of effort time series that were estimated by region for the period 2005-2007 whenever bottom set longline for targeting black scabbardfish in Portuguese waters was used.

Annex 8. The hake deep-water semi-pelagic (“pedra-bola”) longline fishery in Algarve (southern Portugal)”, K. Erzini, J.M.S. Gonçalves, L. Bentes, P.G. Lino, J. Ribeiro, in Fisheries Research, 51 (2001) 327-336.

This document shows the catch rates outcomes of a two year study of the European hake (*Merluccius merluccius*) Piedra bola longline fishery that was carried out in the Algarve (southern Portugal).

Annex 9. Semi-pelagic longline selectivity for two demersal species from the Azores: the black spot sea bream (*Pagellus bogaraveo*) and the bluemouth rockfish (*Helicolenus dactylopterus dactylopterus*), Fernando Sousa, Eduardo Isidro, Karim Erzini, in Fisheries Research, 41 (1999) 25-35.

The study assessed the selectivity of four hook sizes used in a Piedra bola-like longline fishery in the Azores for the black spot sea bream (*Pagellus bogaraveo*) and the bluemouth rockfish (*Helicolenus dactylopterus dactylopterus*)

Annex 10. “First Estimation of the economic impact for the longliner fleet in Galicia of the bottom ban in several areas according to implementing Regulation (EU) 2022/1614”. Study by the Universidad de Santiago de Compostela, December 2022.

Written in Spanish. No translation was provided.

The document concluded that « Los resultados obtenidos indican que la aprobación del reglamento UE 2022/1614 ha generado un impacto negativo significativo en la flota gallega de

palangre pudiendo generar un daño irreversible en términos de destrucción de empresas y empleo. »

Annex 11. “First Estimation of the economic impact for the longliner fleet in Galicia of the bottom ban in several areas according to implementing Regulation (EU) 2022/1614”. Study by the Universidad de Santiago de Compostela, December 2022 (short updated presentation in English)

These slides shows some estimates from a scenario testing exercise of possible revenue changes alongside possible increased fuel costs, given scenarios on decrease in catch and more days at sea that would be possibly induced by restricting access to VMEs for some of the Spanish Burala port fisheries.

STECF comments

STECF observes that the submitted JR proposes to exclude a type of bottom set longlines called Piedra bola (Pedra Boía in Portuguese), from the list of gears prohibited in 11 VME boxes defined in (EU) 2022/1614.

STECF observes that no data is provided in the JR to support the statement that the fleet using the Piedra Bola longline were operating in the VMEs before the fishing prohibition was implemented in 2022. In addition, the JR does not state which gear code that was used for reporting from this fishery. If the Piedra Bola longline were recorded as LLS, it is unclear how a difference can be made between this gear and other bottom set longlines in the historical logbooks and VMS data.

STECF observes that, while some data and information is provided in the JR relating to the species selectivity of Piedra bola longliners from the Spanish fleet targeting hake, no such information is provided for the Portuguese Piedra bola longline vessels which target black scabbard fish. STECF notes that, despite being considered a highly selective gear, that longline fishery has the potential to catch other deep sea species (Ramos et al. 2013).

<u>ToR 1: Pursuant to the Deep-sea access regulation framework review the suitability and potential effectiveness of the proposed conservation and management measure, which is to allow the reintroduction of the longliners “Piedra Bola” into 11 VMEs closed polygons</u>

Suitability of the JR proposal given the direct impact of Piedra bola longlines on VMEs

As specifically requested by the ToRs, STECF considered the work of Pham et al. (2014) which concludes that deep-sea bottom set longline fishing might have “little impact on vulnerable marine ecosystems, reducing bycatch of cold-water corals [compared to bottom trawls] and limiting additional damage to benthic communities”. The study found that “slow-growing vulnerable species are still common in areas subject to more than 20 years of

longlining activity and estimate that one deep-sea bottom trawl will have a similar impact to between 296–1,719 longlines [of 3600 hooks in average]" on the bycatch of epibenthic invertebrates, and suggested that "regulated deep-sea longlining can be an alternative [whenever reducing bycatch] to deep-sea bottom trawling." STECF notes that the Pham et al. study investigated deep-sea bottom set longliners and not the Piedra Bola longline variant as such.

STECF acknowledges that Piedra Bola is a type of bottom set longline raising the line itself in the water column with buoyancies. STECF observes that the target species by the longliners active in the areas are reported to be European hake (*Merluccius merluccius*) for the Spanish fleet, and scabbardfish for the Portuguese fleet. Both species are demersal species that live near the bottom at different depths on the continental shelf and upper ocean slope and move in the water column at different depths. For these reasons, the JR states that the raising of the fishing line from the bottom is expected to increase catch rates of hake when hooks on the line are placed at a distance from the sea bottom. However, no data on the comparison of catch rates between bottom versus raised lines were provided to STECF to support such a statement.

STECF observes that the supportive documents of the JR describe the gear subcomponents touching the bottom as several stones (cement blocks weighing between 4 and 100 kg) that anchor the surface beacon holding the longline. STECF observes that the ISPAMER and PALFON studies of the IEO estimated the potential impact of hake longline weights. According to the studies, the calculation of total surfaces of the gear weights contact indicates that a fishing operation (with an average length of the longline of 7 km) would contact the seabed between 0.4 m^2 (ISPAMER) to 0.94 m^2 (PALFON-EMV) in total.

STECF observes that beyond that estimation, there is little additional information in the background information on the impact of the fishery on the seabed. The studies carried out with ISPAMER and PALFON did only estimate the stones interface with the seafloor, but did not evaluate the actual effect of the Piedra Bola longline fishing gears on the physical characteristics of the sea bottom, including biogenic structure and corals. STECF observes furthermore that the weights and stones may also drift depending on weather conditions and soaking time, although that part is not discussed in the documents provided. Stone drift could potentially impact a larger area than the 0.9m^2, per line which means that the estimated impacted surface could be underestimated.

STECF also observes that by nature, hooks and weights can harm the biogenic structure of the VMEs, an effect that would get unnoticed when a large proportion of the damage is likely to occur at the bottom and is therefore not accounted for in the on-deck assessment provided in the JR.

STECF observes that the catch rate of target species (hake) versus non-target species, e.g. invertebrate and deep-sea species, are reported in the JR. According to this data the gear is considered size and species selective for hake (as documented by the Annexes of the JR) but has some bycatch of invertebrates.

STECF observes that the ISPAMER and PALFON studies aimed to obtain scientific information on catch rates and by-catches of VME indicator species such as cold-water corals, sponges, and sea pens, that would help clarify the effect of the fishery on vulnerable marine ecosystems. The studies reported high selectivity of fish, minimal discarding and reported by-caught invertebrates.

STECF observes that hooks can accidentally catch organisms from the seabed during some fishing operations. While the study argues that the rates are very low, STECF observes that species characteristic of VMEs were nevertheless caught (0.0021 VME species per 1000 hooks (Table 10 in Annexe1 to the JR) in the ISPAMER project having sampled 1,119,199 hooks along 2,659 km of lines, with average of 2597 hooks per trip). STECF observes that there is no raising of these sampling results to the total amount of set operations provided in the JR, nor to the local abundance of those species. For these reasons STECF observes that the study does not allow estimating the total bycatch effect on the VMEs.

Furthermore, STECF stresses that as the commercial vessels participating in the study did not obtain permits to fish within the VMEs, the observation at sea from these commercial trips on longliners sampled occurred in areas outside the VMEs, on the edges or sometimes far from the prohibited areas and bottoms. STECF observes that the sampling were carried out mainly in ICES area 7 (and partly in 8a), therefore far from the 11 VME boxes under evaluation, which are located in ICES areas 8c and 9a. STECF notes that for this reason the benthic bycaught elements (benthos, fish and biogenic structure or stones) could be an underestimation of what could be incidentally caught within VMEs, where such elements are more naturally abundant.

Effectiveness of the JR proposal and significant adverse impacts of Piedra Bola longlining on VMEs

STECF was tasked to review the suitability and effectiveness of the JR proposal. In this context, STECF was asked to estimate if the Piedra Bola longline has significant adverse impacts (SAI) on VMEs, given that significant adverse impacts are defined in the FAO international guidelines.

STECF observes that ICES advice has been delivered as requested by the Commission (ICES 2021, 2022, 2023, 2024), in which ICES states that “Available evidence suggests that static gears have a lower impact on VME habitats than mobile bottom-contacting gears, but further investigations are required to understand the risk of SAI from static gear fishing on VMEs”.

The EU Deep-Sea Access Regulation stipulated that (Art 9 (4).): *“Member States shall use the best available scientific and technical information, (…) [the] assessment shall be conducted in accordance with the 2008 FAO International Guidelines for the Management of Deep-Sea Fisheries in the High Seas. (…) The Commission may remove an area from the list provided that it determines, on the basis of an impact assessment and after consulting the competent scientific advisory body, that there is sufficient evidence to indicate that VMEs are not present, or that appropriate conservation and management measures have been adopted which ensure that significant adverse impacts on VMEs in that area are prevented.“*

STECF recalls that the FAO international guidelines defines Significant adverse impacts as those that compromise ecosystem integrity (i.e. ecosystem structure or function) in a manner that: (i) impairs the ability of affected populations to replace themselves; (ii) degrades the long-term natural productivity of habitats; or (iii) causes, on more than a temporary basis, significant loss of species richness, habitat or community types. Impacts should be evaluated individually, in combination or cumulatively.

FAO international guidelines – Significant Adverse Impacts

§17. Significant adverse impacts are those that compromise ecosystem integrity (i.e. ecosystem structure or function) in a manner that: (i) impairs the ability of affected populations to replace themselves; (ii) degrades the long-term natural productivity of habitats; or (iii) causes, on more than a temporary basis, significant loss of species richness, habitat or community types. Impacts should be evaluated individually, in combination and cumulatively.

§18. When determining the scale and significance of an impact, the following six factors should be considered:

i. the intensity or severity of the impact at the specific site being affected;

ii. the spatial extent of the impact relative to the availability of the habitat type affected;

iii. the sensitivity/vulnerability of the ecosystem to the impact;

iv. the ability of an ecosystem to recover from harm, and the rate of such recovery;

v. the extent to which ecosystem functions may be altered by the impact; and

vi. the timing and duration of the impact relative to the period in which a species needs the habitat during one or more of its life-history stages.

§19. Temporary impacts are those that are limited in duration and that allow the particular ecosystem to recover over an acceptable time frame. Such time frames should be decided on a case-by-case basis and should be in the order of 5-20 years, taking into account the specific features of the populations and ecosystems.

§20. In determining whether an impact is temporary, both the duration and the frequency at which an impact is repeated should be considered. If the interval between the expected disturbances of a habitat is shorter than the recovery time, the impact should be considered more than temporary. In circumstances of limited information, States and RFMO/As should apply the precautionary approach in their determinations regarding the nature and duration of impacts.

STECF observes that VMEs are defined by nature as slow to recover and with recovery time after damage exceeding 20 years, if recovery is at all possible (e.g. Baco et al. 2019). As recalled by the FAO criteria to define VMEs (FAO guidelines §42) and used by ICES whenever defining VME boxes are: 1. Uniqueness or rarity; 2. Functional significance of the

habitat; 3. Fragility; 4. Life-history traits or component species that make recovery difficult; 5. Structural complexity.

STECF notes that scientific studies show that VME communities are highly vulnerable and cannot withstand any pressure intensity without it leading to severe degradation, given occurrences of long living and deep-sea corals (Clark et al., 2016, Watling & Auster, 2017). VME species are often naturally rare across their distribution range and define their uniqueness. STECF recalls that after degradation and cessation of a stressor, such as fishing pressure, the “full recovery of community structure and ecosystem functions is one out of several possible outcomes and by no means the default expectation.” One of the possible outcomes is thus no recovery at all. “Absence or limited colonization potential of source populations of the lost species reduce the probability that the original communities re-establish” (Lotze et al. 2014; Vos et al. 2024).

STECF observes therefore that there is an inconsistency between the Deep Sea Regulation stating that activities shall not yield “significant” adverse impact (SAI), and the scientific definition of VME suggesting that VME cannot withstand “any” impacts. If the management target is to only avoid impacts considered significant, least impactful gears could be considered for limited use and a threshold could be set for example for selected fishing techniques on this specific habitat. However, if the management target for VME is zero impact there shall be no possibility for any impacting fishing technique even if less impactful than others.

Based on the FAO guidelines, STECF interprets that defining what significant adverse impacts (SAI) is would require:

i) the need for a quantification of maximum removal rates (if “removal rates” is defined as the ratio between the number of cold-water corals and other deep sea vulnerable species removed per unit of impacted area and the density of cold-water corals in the area),

ii) the need for deciding on a threshold distinguishing significant from non-significant adverse impact, and

iii) the number of fishing operations and their average catch rates.

STECF observes that these three points (a measure of removal rates, a threshold for acceptable impact, and a number of fishing operations) are not documented in the supportive document to the JR. Without knowing how many fishing operations will take place in a year it is not possible to raise estimates of the direct impact of Piedra Bola longlining on the VME components on the entire fishing effort that could be deployed using such gear.

STECF observes that usually, identifying a threshold is challenging, especially given that the environmental status degrades from good to bad environmental status alongside a gradient without clear radical change (e.g. Hiddink et al. 2023). However, in case of VMEs, the scientific definition given above supports the assessment that as soon as there is an adverse impact, it will be significant. Therefore, STECF observes that pressure from Piedra Bola longlines on VMEs might not meet the FAO criteria, even if qualified as “semi-pelagic”

longlines as is done in the JR, given that i) the intensity or severity of the impact touching the bottom at the specific site being affected is highly uncertain but not null; ii) The spatial extent of the impact relative to the availability of the habitat type affected is highly uncertain; iii) the sensitivity/vulnerability of the ecosystem to the impact is very high; iv) the ability of an ecosystem to recover from harm, and the rate of such recovery is low; v) the extent to which the impact may alter ecosystem functions is unknown; and vi) The timing and duration of the impact relative to the period in which a species needs the habitat during one or more of its life-history stages likely exceed 5-20 years, taking into account the specific features of the populations and ecosystems.

Remark about the best available techniques

STECF acknowledges that bottom set longlining such as the Piedra bola longline has significantly less impact on seabeds than other fishing techniques that touch the bottom such as mobile bottom trawls, and, transitioning from mobile contacting gears such as bottom trawls towards, such low-impact gears contribute to the protection of seabeds. STECF acknowledges also that many fisheries operating near VMEs use longlining (such as those around the Azores). VMEs are often defined as rich and abundant habitats, which may still exist today because detrimental fishing practices have not operated there in the past. STECF therefore notes that the impact to seabed from bottom set longlining might be deemed non significant in other areas than in VMEs.

ToR 2 Regarding the assessment pursuant to Article 12 of the Technical Measures Regulation STECF is requested to assess compatibility of this proposed measure with the objectives and conditions set out in Articles 12(3) and (4) of Regulation 2019/1241.

The issue with adding extra fishing gear into the EU regulation

The TMR (EU Reg. 2019/1241) defines the longline as “bottom set longline” or “surface set longline” where:

“‘longline’ means a fishing gear consisting of a main line of variable length, to which branch lines (snoods) with hooks are fixed at intervals determined by the target species. The main line is anchored either horizontally on or near the bottom or vertically, or can be allowed to drift on the surface;”

STECF acknowledges the efforts of the JR to refine the definition of the longline used in northern Spain fishing activities. However, STECF observes that the longliner using the Piedra bola still uses a demersal gear, in the sense that at least one gear subcomponent touches the bottom (i.e. the weight (“stones”) used to maintain the gear on the seafloor). Also, STECF observes that such a semi-pelagic longline gear does not exist in the official list of gear in legislative text and is also not identified in the manual (Popescu and Breuer 2024 - Handbook of fishing gears used by the EU fleet). However, in the FAO manual is mentioned in the definition of set longlines that the mainline could also float off the seabed: "A typical set longline includes a mainline either lying on the seabed or floating off the seabed (He et al.

2021)". STECF observes that the Piedra bola longline fits with this definition. Hence, STECF observes that there is no coding for longlines outside those of LLD (Drifting longlines), LVT (Vertical lines) and LTL (Trolling lines). A long line is coded LLS (set longlines). LLS defines a longline as a horizontal mainline attached to branch lines that terminate with baited hooks. Set (or demersal) longlines are fixed on or near the seabed at both ends of the mainline, with a marker buoy at one end. The gear may be tens of kilometres long. It is the most common type of hooks-and-lines gear (Popescu and Breuer 2024).

STECF observes that the precise design of gear specifications for this bottom set longline variant remains unclear (number and weight of stones per line meter are not defined). STECF recalls that it is essential to prevent maladaptation arising by the imprecision in several gear specifications covered by the same gear name and code. The modification by fishers of certain gear properties not specified in the legislation can significantly influence the efficiency of a fishing gear (e.g. Krag et al. 2016) beside the skipper experience which can affect gear–habitat contact. The inclusion of a new gear definition in the EU legal framework (Commission Delegated Decision (EU) 2021/1167, see Table 5) and amendment in the list of gears in the TMR would also ensure that logbooks correctly report this type of gear.

Effort displacement or attraction effects

STECF observes that Article 12 of the TMR stresses that it should be given a "particular attention to the mitigation of negative effects of the displacement of fishing activity to other sensitive areas" (Art 12(2)). STECF recognizes that VMEs are often rich, abundant biomass habitats that may exist possibly precisely because detrimental fishing did not occurred to them, which can therefore induce an attraction effect.

STECF observes that the JR is not supplemented with any mapping of fishing activities, before or after the implementation of VME boxes, within or outside such boxes. Therefore, STECF cannot deduce what would be the magnitude of the displaced effort and the importance of it. However, STECF observes that there is a risk for reallocating effort in surrounding areas, as well as attracting effort in newly open areas.

STECF conclusions

STECF concludes that Piedra Bola longlines cannot be considered to be without bottom impact, due to the stones and the possible drift of the fishing gear.

Given that any bottom contacting gears will have some impact on seabeds, STECF concludes that if any fishing with bottom contacting gears is to be permitted, a suitable threshold for the intensity of fishing would need to be defined according to a specified given level of risk. For the VMEs, such a threshold is to be defined in accordance with FAO guidelines as referred to by the Deep Sea Access Regulation.

STECF concludes, in line with previous ICES advice, that static gears have a lower impact on VME habitats than mobile bottom contacting gears but that further investigations are required to understand the risk of Significant Adverse Impact (SAI) from static gear fishing on VMEs.

For now, STECF cannot assess the extent of any likely impacts of the Piedra bola longline on the VMEs due to the lack of information on the total amount of effort to be deployed within the VMEs and a full assessment of the impact of the gear per unit of effort deployed on the seabed.

While information on the potential impact of the Piedra Bola gear on VMS was referred to in the JR, the studies were undertaken outside, sometimes far from, the designated VMEs. Hence, the estimated impacts from these studies on VMEs are likely to be underestimated.

STECF concludes that by nature, hooks and weights can harm the biogenic structure of the VMEs, an effect that would go unnoticed because, due to the nature of the longline fishing gear, the damaged organisms are not brought back onto the vessel.

References

FAO.International Guidelines for the Management of Deep-sea Fisheries in theHigh Seas.Directives internationales sur la gestion de la pêche profonde en haute mer.Directrices Internacionales para la Ordenación de las Pesquerías de AguasProfundas en Alta Mar.Rome/Roma, FAO. 2009. 73p.

Baco et al. 2019. Amid fields of rubble, scars, and lost gear, signs of recovery observed on seamounts on 30- to 40-year time scales. Sci. Adv. 5, eaaw4513 10.1126/sciadv.aaw4513

Clark, M. R., Althaus, F., Schlacher, T. A., Williams, A., Bowden, D. A., & Rowden, A. A. (2016). The impacts of deep -sea fisheries on benthic communities: A review. ICES Journal of Marine Science, 73, i51–i69. https://doi.org/10.1093/icesjms/fsv123

Cortés V, Arcos JM, González-Solís J (2017) Seabirds and demersal longliners in the northwestern Mediterranean: factors driving their interactions and bycatch rates. Mar Ecol Prog Ser 565:1-16. https://doi.org/10.3354/meps12026

He, P., Chopin, F., Suuronen, P., Ferro, R.S.T and Lansley, J. 2021. Classification and illustrated definition of fishing gears. FAO Fisheries and Aquaculture Technical Paper No. 672. Rome, FAO.

Hiddink, J. G., Valanko, S., Delargy, A. J., & Van Denderen, P. D. (2023). Setting thresholds for good ecosystem state in marine seabed systems and beyond. ICES Journal of Marine Science, 80(4), 698-709. https://doi.org/10.1093/icesjms/fsad035

ICES. 2023. ICES Workshop to evaluate long-term biodiversity/ecosystem benefits of NEAFC closed and restricted areas (WKECOVME). ICES Scientific Reports. 5:89. 91pp. https://doi.org/10.17895/ices.pub.24198771

ICES. 2021. EU Request to advise on the list of areas where VMEs are known to occur or are likely to occur and on the existing deep-sea fishing areas (ref. (EU)2016/2336). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, eu.2021.01. https://doi.org/10.17895/ices.advice.7507

ICES. 2022. EU request for a Technical Service to provide data output of the ICES 2021 advice on the deep-sea access regulation (ref. (EU)2016/2336) as coordinates for EU

waters area only. In Report of the ICES Advisory Committee, 2022. ICES Advice 2022. sr. 2022.02. https://doi.org/10.17895/ices.advice.10039
ICES. 2023. Advice on areas where Vulnerable Marine Ecosystems (VMEs) are known to occur or are likely to occur in EU waters. In Report of the ICES Advisory Committee, 2023. ICES Advice 2023, vme.eu https://doi.org/10.17895/ices.advice.22643356
ICES. 2024. Advice on areas where Vulnerable Marine Ecosystems (VMEs) are known to occur or are likely to occur in EU waters. In Report of the ICES Advisory Committee, 2024. ICES Advice 2024, vme.eu https://doi.org/10.17895/ices.advice.26983726
Krag, L. A., Herrmann, B., Feekings, J. P., & Karlsen, J. D. (2016). Escape panels in trawls – a consistent management tool? Aquatic Living Resources, 29(3), Article 306. https://doi.org/10.1051/alr/2016028
Lotze, H. K., Coll, M., Magera, A. M., Ward-Paige, C., & Airoldi, L. (2011). Recovery of marine animal populations and ecosystems. Trends in Ecology & Evolution, 26(11), 595-605. https://doi.org/10.1016/j.tree.2011.07.008
NAFO. 2016. Report of the Scientific Council Meeting. 03–16 June 2016, Halifax, Nova Scotia. NAFO SCS Document 16–14 Rev., Serial No. N6587.
Pham, C. K., Diogo, H., Menezes, G., Porteiro, F., Vandeperre, F., & Morato, T. (2014). Deep-water longline fishing has reduced impact on Vulnerable Marine Ecosystems. Scientific Reports, 4(1), 1-6. https://doi.org/10.1038/srep04837
Popescu, I., Breuer M., 2024, Research for PECH Committee – Handbook of fishing gears used by the EU fleet, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels
Ramos, H., Silva, E., and Gonçalves, L. 2013. Reduction of deep-sea sharks' by-catches in the Portuguese long-line black scabbard fishery – Final Report to the European Commission MARE/2011/06 (SI2.602201). Horta. seaExpert, Lda.
Van Denderen, P. D., Holah, H., Robson, L. M., Hiddink, J. G., Menot, L., Pedreschi, D., Kazanidis, G., Llope, M., Turner, P. J., Stirling, D., Murillo, F. J., Kenny, A., Campbell, N., Allcock, A. L., M, J., Johnston, G., Orejas, C., Serrano, A., Xavier, J. R., . . . Valanko, S. (2022). A policy-based framework for the determination of management options to protect vulnerable marine ecosystems under the EU deep-sea access regulations. ICES Journal of Marine Science, 79(1), 34-49. https://doi.org/10.1093/icesjms/fsab237
Vos, M., Hering, D., Gessner, M. O., Leese, F., Schäfer, R. B., Tollrian, R., Boenigk, J., Haase, P., Meckenstock, R., Baikova, D., Bayat, H., Beermann, A., Beisser, D., Beszteri, B., Birk, S., Boden, L., Brauer, V., Brauns, M., Buchner, D., . . . Sures, B. (2023). The Asymmetric Response Concept explains ecological consequences of multiple stressor exposure and release. Science of The Total Environment, 872, 162196. https://doi.org/10.1016/j.scitotenv.2023.162196
Watling, L., & Auster, P. J. (2017). Seamounts on the High Seas Should Be Managed as Vulnerable Marine Ecosystems. Frontiers in Marine Science, 4, 236096. https://doi.org/10.3389/fmars.2017.00014

6.3 Assessment of Joint recommendation on conservation measures in Nordvästra Skånes havsområde in the Kattegat

Background provided by the Commission

On 6 November 2024, the North Sea Member States (with Sweden as initiating Member States) submitted to the Commission a joint recommendation suggesting conservation measures for the Natura 2000 site Nordvästra Skånes havsområde in the Kattegat.

The joint recommendation entails the division of the site in three parts (North part, no-take part and South part). The conservation measures consist of:

1. the prohibition of mobile bottom contacting gears in the entire site.

2. the prohibition of longlines, static and fyke nets as follows: (i) in the North area, only half of the year (ii) in the South area, all the year -except that specific permits can be issued if compatible with the marine protected area.

A specific use of fyke nets (with specific technical measures) for recreational fisheries is allowed in the North and South throughout the year.

Control measures: notably the use of AIS for all vessels. The provisions in Article 50.3 of Regulation (EU) 1224/2009 (Fishing Restricted Areas) apply to all vessels (this is in addition to the measures that apply by default).

Background documents are published on:

https://stecf.ec.europa.eu/meetings-calendar/past-meetings

Request to the STECF

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.
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 the conservation objectives of the sites (in relation to fishing as a pressure); b) and to what extent the proposed measures can prevent: (i) deterioration of natural habitats and the habitats of species and (ii) significant disturbance of species protected in the site, as required by the Habitats Directive.

3. Comment on whether the proposed control measures are adequate in relation to the proposed management measures.
4. If possible, comment on how the proposed conservation measures may affect the fishing activity 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 (displacement) and potential economic and ecological consequences.
5. If possible, comment on the continuation of recreational fisheries throughout the year in the Northern and Southern areas, and the use of the technical measures for carrying out such fishery (whether it is a selective fishery).

Summary of the information provided to STECF

STECF was provided with the Joint Recommendation (JR) and background documents collated by DG MARE:

1) JR for the MPA NV Skånes havsområde

The Joint Recommendation contains the Swedish proposal for fisheries conservation measures in waters under the sovereignty or jurisdiction of Sweden for the marine protected area Nordvästra Skånes havsområde in the Kattegat. The area is designated as Natura 2000, and part is designated as a nature reserve. The proposal has been coordinated with Denmark and Germany, having a direct management interest in the fisheries affected by these measures. The North Sea Advisory Council has also been informed and consulted as recommended in the EC guidelines.

The proposal notes that the fisheries conservation measures proposed in the JR are as follows:

1. Designation of a no take zone to exclude all fishing activity.
2. Exclusion of all mobile bottom contacting gears from entire MPA.
3. Exclusion of longlines, static nets and commercial fyke nets in:

   (i) the northern zone for 6 months the year

   (ii) the southern zone all the year - except that specific permits can be issued if compatible with the marine protected area.
4. Allowed use of recreational fyke nets (fitted with two circular escape openings with a diameter of at least 75 mm which are situated on each side of the codend) in northern and southern zone throughout the year.
5. Implementation of AIS on all vessels as a control measure (Provisions in Article 50.3 of Regulation (EU) 1224/2009 (Fishing Restricted Areas)
6. Obligatory use of acoustic deterrents on all nets.

The objective of the proposed conservation measures is to, where possible, eliminate or minimise the negative impact of fishing activity on the degradation of the marine environment within the Nordvästra Skånes havsområde MPA.

2) Proposal_NSH_HKV

This document contains a merged draft proposal for fisheries conservation measures in the marine protected areas Havet kring Ven in the Baltic Sea and Nordvästra Skånes havsområde in the Kattegat. STECF PLEN 24-03 addressed the JR on fisheries conservation measures for Havet kring Ven in the Baltic Sea and STECF PLEN 25-01 is addressing the fisheries conservation measures proposed for Nordvästra Skånes havsområde in the Kattegat. Therefore this summary concerns Nordvästra Skånes havsområde in the Kattegat only.

The proposal is thorough, with well defined conservation measures and supported by scientific evidence, which are in line with the Commission's 2018 guidelines[4].

3) Appendix_NSH_HKV

This document provides the full list of appendixes describing an overview of the marine protected areas where fisheries conservation measures are proposed in the Kattegat (Nordvästra Skånes havsområde) and the Baltic Sea (Havet kring Ven). This summary only concerns Nordvästra Skånes havsområde in the Kattegat.

The appendixes include information on:

- Existing national fisheries regulations, both in Swedish and Danish fisheries legislation, overlapping with proposed fisheries conservation measures.
- Summary of harbour porpoise survey and estimated distribution.
- Summary of drop camera survey and findings in terms of habitat, epi-fauna and bottom trawl impacts.
- Detailed information on effort, landings and value of fishing activity in the proposed MPA.
- Summary of consultation with North Sea Advisory Council, and Baltic Sea Advisory Council.

In relation to the potential impact of these proposed fisheries conservation measures, this appendix highlights the NSAC concerns around the exclusion of fishing activity from the

4 https://oceans-and-fisheries.ec.europa.eu/system/files/2018-06/swd_2018_288_en.pdf

southern zone, which will contribute to exacerbate the cumulative pressure the fishers are experiencing in the area, such as the development of offshore wind farms (OWFs).

4) adhoc_24118_report_20-01-2025_v2

The Ad hoc report concluded that the JR details sufficient measures to reach the proposed conservation goals. In particular, that the establishment of a large no-take zone, from which all fisheries are excluded would eliminate the impact of fishing on by catch rates. However, the ad hoc report also highlighted a number of shortfalls:

1. The continued use of certain fishing methods (longline, static net, and fyke net) in the northern and southern zones, even with spatial, temporal, and compliance regulations, will not fully eliminate the by-catch impact on harbour porpoises.
2. Benefits to sea birds are unclear as no supporting information have been supplied, i.e. distribution maps and scientific studies.
3. Socio-economic impacts and on fisheries could not be assessed as fleet data was outdated (2015 - 2019)
4. The impact and risk of fisheries effort displacement could not be assessed as no detailed fleet information was provided.

STECF observations

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 that the fisheries conservation measures proposed in the JR are as follows:

1. Designation of a no take zone to exclude all fishing activity.
2. Exclusion of all mobile bottom contacting gears from entire MPA.
3. Exclusion of longlines, static nets and commercial fyke nets in:

   (i) the northern zone for 6 months the year

   (ii) the southern zone all the year - except that specific permits can be issued if compatible with the marine protected area.
4. Allowed use of recreational fyke nets (fitted with two circular escape openings with a diameter of at least 75 mm which are situated on each side of the codend) in northern and southern zone throughout the year.
5. Implementation of AIS on all vessels as a control measure (Provisions in Article 50.3 of Regulation (EU) 1224/2009 (Fishing Restricted Areas)
6. Obligatory use of acoustic deterrents on all nets.

STECF observes that the proposed introduction of a no take zone, is a solution to eliminate any negative impact of fishing activity on the marine environment. The proposed no take

zone forms the largest part of the JR closure covering approximately 60,000 hectares.

STECF observes that the effectiveness of this closure is further strengthened by the commitment of the three Member States fishing in this area: Denmark, Germany and Sweden.

STECF notes that although the remaining conservation measures (seasonal closures, gear specifications and application of acoustic deterrents) will likely contribute to a reduction in by-catch of birds and marine mammals, they will not eliminate the negative impacts of fishing activities on the marine ecosystem, or habitat degradation.

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 the conservation objectives of the sites (in relation to fishing as a pressure);

b) and to what extent the proposed measures can prevent: (i) deterioration of natural habitats and the habitats of species and (ii) significant disturbance of species protected in the site, as required by the Habitats Directive.

STECF observes that the proposed no take zone could achieve multiple conservation objectives for habitats and species.

STECF further notes that the proposed seasonal closure (15 November to 15 March) in the northern zone may contribute towards the protection of birds and marine mammals. However, while the closure is likely well suited for the protection of main concentration of wintering birds (Jan –Mar), it does not fit the goal of minimizing the by-catch of harbour porpoise as the timing of the closure does not align with the peak presence of Belt Sea harbour porpoises during their summer reproductive and calving season; it does though protect during a proportion of the gestation period (Börjesson and Read, 2003).

STECF observes that, if the net density is high in the Natura 2000 site, using acoustic deterrent devices (ADD's) might not be the best option to protect the harbour porpoise population in the site. Indeed, ADD's are acoustic deterrent devices that scare away the animals from the fishing gears, depending on the density of nets deployed on site, such a deterrent effect, could exclude the animals from visiting the site. As such, STECF observes that if the net density is too high such use of ADD's in an harbour porpoise hotspot area would potentially be in conflict with achieving the objective of the Natura 2000 site, which is to ensure that the species remains part of its habitat in the long term, its natural range does not decrease, and there is enough habitat for the species to be maintained in the long term (EU Habitat Directive). However, as no information on the net density (and other biological considerations on the reaction of harbour porpoise to it) in the Natura 2000 site was provided in the JR, STECF cannot assess this risk.

STECF highlights that alternative measures to reduce the negative impacts of fishing activities, such as smaller nets (referred to as "low-height nets" or "half-height nets",

Northridge et al. 2017) might be more effective to mitigate by-catch if the net density in the Natura 2000 site is high, while avoiding adverse harbour porpoise behavioural response to ADD's. Adding acoustically detectable add-ons to nets, such as pearls, has also been shown to help the harbour porpoise avoid being trapped in nets (Kindt Larsen et al. 2024).

STECF notes that despite the dated fleet data supplied in the JR it is possible to conclude that fishing effort in this area has likely reduced in recent years due to management measures of historically targeted species such as lumpfish and cod. STECF also notes that there will be limited TAC available for cod.27.21 due to ICES zero catch advice in 2025 and 2026 (ICES 2024). Since 2025, lumpfish is a prohibited species in both Sweden[5] and Denmark[6]. These additional management measures may contribute positively to the reduction of by catch in areas where fishing is possible.

STECF notes that the proposed implementation of the no-take zone may contribute to protecting the food web. Although this impact may be minimal in the short term, in the longer-term reducing fishing mortality of predatory species (such as cod, turbot, flounder, harbour porpoise, and marine birds) in an ecologically important area, may strengthen the resilience of the food web and support species' life cycles (e.g. spawning)(Vitale *et al*. 2008). Additionally, the protection of the sea-floor from mobile bottom-contacting gear is expected to bring moderate benefits in the short term, as the benthic community has already been shaped by sustained fishing pressure (Jennings et al. 2001, ICES 2024a), and uncertainties remain regarding possible effort displacement. Nonetheless, any improvement in benthic habitat condition and food web functioning would represent a positive step towards recovery.

STECF notes that extensive ongoing research projects will continue delivering results on alternatives to the use of ADD's (see EU funded Marine Beacon, CIBBRiNA, REDUCE). The outcomes of such projects will hopefully help to identify alternative and additional long-term solutions to help protect harbour porpoises, including electronic monitoring, better spatial or temporal avoidance, modified gear geometry, and best practices in handling unwanted catches.

ToR 3. Comment on whether the proposed control measures are adequate in relation to the proposed management measures.

STECF observes that the JR propose that AIS will be obligatory for all vessels (including small scale fleet, <15m) operating in, or transiting through the MPA. Furthermore, the JR states that transit through the area is only allowed if all gears are lashed and stowed, the transit is continuous and expeditious and the speed is above six knots.

5 HVMFS 2025:6

6 bekendtgørelse nr. 1430 af 5. december 2024 om regulering af fiskeriet § 17

While Acoustic Deterrent Devices (ADDs) must be used on static nets in operating in the northern and southern zones, STECF notes that the JR lacks control measures to ensure that the ADDs are deployed as intended by (EU) Regulation 2020/967.

STECF observes that the draft proposal outlines the proposed methods of AIS compliance will be assessed by detecting infringements, either in post landings or in real time, with targeted inspections and/or real-time monitoring.

STECF observes that the most effective monitoring and control of the Natura 2000 site would require additional information and complementary technical tools such as electronic monitoring systems to record and quantify by-catch events.

ToR 4 If possible, comment on how the proposed conservation measures may affect the fishing activity 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 (displacement) and potential economic and ecological consequences.

STECF observes that due to a lack of current information it was not possible to determine if the trends in fishing activity described in the proposal for the period 2015 – 2019, describe the current fishing patterns. Additionally, the lack of spatial information on the trends in small scale fleet (<15m) in the JR limited the conclusions the contractor and STECF could come to. Therefore, it was not possible to determine the socio-economic impact of these measures proposed on the fleets operating in this region.

STECF notes that if the proposed measures are implemented, there may be an incentive to displace fishing to avoid operating with ADDs to minimise costs (provided that the cost is borne by the fisher). However, STECF notes there is no information accompanying the JR on the suitability of other fishing grounds to which fishing effort might be displaced or whether displacement of effort is an option.

ToR 5. If possible, comment on the continuation of recreational fisheries throughout the year in the Northern and Southern areas, and the use of the technical measures for carrying out such fishery (whether it is a selective fishery).

STECF observes that the proposed continuation of recreational fishing is generally consistent with the conservation objectives set out in the JR, as it restricts activity in the northern zone to six months per year and allows limited activity in the southern zones, which will reduce the potential impact of fishing related by catch of species such as harbour poise during these months. The proposal specifies that recreational fishing is permitted year-round using a maximum of six fyke nets, each fitted with two circular escape openings of at least 75 mm in diameter, located on either side of the codend.

STECF observes that there is no evidence in the JR to indicate how this proposed JR could impact the totals of bird and mammal by-catch in the northern and southern zone.

STECF observes that no information has been provided on the use of fyke nets or to clarify the current level of recreational fishing activity in the area, or the number of vessels operating in the fishery.

STECF conclusions

STECF concludes that the proposed introduction of a no-take zone will eliminate any negative impact of fishing activity on the marine environment within the zone.

STECF concludes that the JR may reduce the by catch of animals navigating the northern and southern areas. However, for the proposed ADD measures to be effective, adequate monitoring and control measures need to be put in place to ensure that the ADDs are deployed as intended by (EU) Regulation 2020/967.

Furthermore, STECF concludes that there is a risk that deployment of ADD's on nets in northern and southern zones may displace harbour porpoise away from the sites. The extent of any such displacement will relate to the density of net in the site and would be counter-productive to achieving the Natura 2000 objectives. STECF concludes that a more effective measure, which would counter any risk of displacement of harbour porpoise arising from the deployment of ADD's on nets would be to prohibit all fishing with nets in the area and at the same time contribute to achieving the Natura 2000 site objectives.

STECF cannot conclude on socio-economic effects of the proposal as provided fisheries data is outdated (2015 – 2019), and key information on this aspect is missing (e.g.the number of vessels, the full area extent of the engaged vessels, and the possibility of reallocating effort spatially).

STECF concludes that restricting recreational fyke net fishing to the northern and southern zones may help reduce by catch of marine mammals and birds. However, in the absence of data on current catch levels or the number of vessels involved in this fishery, it is not possible to assess the scale of this potential benefit. By-catch remains possible, and without such information, STECF cannot determine the overall effectiveness of the proposed conservation measure.

STECF concludes that, monitoring with AIS on all vessels present in the site as proposed by the JR, will allow national authorities to remotely monitor if vessels are present in the sites and to direct sea or air surveillance to the site if considered necessary.

References

ICES. 2024a. Working Group on Fisheries Benthic Impact and Trade-offs (WGFBIT; outputs from 2023 meeting). ICES Scientific Reports. 6:35. 156 pp. https://doi.org/10.17895/ices.pub.25603191

ICES. 2024b. Cod (Gadus morhua) in Subdivision 21 (Kattegat). In Report of the ICES Advisory Committee, 2024. ICES Advice 2024, cod.27.21 . https://doi.org/10.17895/ices.advice.25019213

Jennings, S., Dinmore, T.A., Duplisea, D.E., Warr, K.J., Lancaster, J.E., 2001. Trawling disturbance can modify benthic production processes. Journal of Animal Ecology 70, 459-475.

F. Vitale, P. Börjesson, H. Svedäng, M. Casini, The spatial distribution of cod (Gadus morhua L.) spawning grounds in the Kattegat, eastern North Sea, Fisheries Research, Volume 90, Issues 1–3, 2008, Pages 36-44, ISSN 0165-7836, https://doi.org/10.1016/j.fishres.2007.09.023.

6.4 Original request included in section 7.3

6.5 Review of the request to reopen the bank of Chamelea gallina for mechanised dredges boats in the Ebro Delta

Background provided by the Commission

Article 19 of Council Regulation (EC) No 1967/2006 concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea ('MEDREG') requires Member States to adopt management plans for fisheries conducted by trawl nets, boats seines, shore seines, surrounding nets and dredges within their territorial waters.

In 2014, the Autonomous Community of Catalonia prepared the first management plan for mechanised dredges exploiting mollusc bivalves (Donax spp., Chamelea gallina and Callista chione). The draft plan and its technical information were assessed by the STECF in November 2014 (PLEN 14-03). After revision, it was adopted by Order ARP/362/2015 of 15 December. The validity of the plan ended on 22 December 2018. In 2019, the Directorate-General for Fisheries and Maritime Affairs (DGPAM) of the Autonomous Community of Catalonia proposed a revised plan, taking into account the results of a scientific monitoring carried out between 2016-2018 by the DGPAM and the consultancy TECNOAMBIENTE, as well as recommendations from the co-management committee and direct fishers.

In 2019, the new Management Plan provided information on fisheries using mechanized dredges and on the stocks they exploit, particularly donax clams (Donax ssp.), venus clams (Chamelea gallina) and smooth clams (Callista chione). Taking into an account the latest results from monitoring, the plan proposed a package of measures to reduce fishing effort, including the closure of fisheries for venus clams and smooth clams.

In October 2024, Catalonia asked to reopen the fishery for the "chirla" (Chamelea gallina) bank for boats with mechanized dredgers in the Ebro delta. Catalonia considers this "fishing ground, open for exploitation by the fleet of boat dredgers since November 2023, shows a clear recovery of the bank, with the best abundance and biomass data recorded in recent years".

Background documents are published on:

https://stecf.ec.europa.eu/meetings-calendar/past-meetings

Request to the STECF

TOR 1.

Advice and assess whether the documents provided and the existing management plan in Catalonia contain 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 III of the MEDREG;

- 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, if any, the proposed modifications of the management plan i.e. closure of certain fishing grounds, fishing effort reductions and the duration of management plan;
- - Safeguards to ensure that quantifiable targets are met, as well as remedial actions, where needed, including situations where the deteriorating 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 gradually 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.

TOR 2.

If deemed necessary, provide any recommendations and guidance on how to obtain improved scientific/technical supporting material for the monitoring and the management 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

The information submitted by Spain consists of:

1) A technical report supporting the proposal of reopening the bank of *Chamelea gallina* to mechanised dredges in the Ebro Delta. To comply with Article 19 of the Council Regulation (EC) No 1967/2006 (hereafter, MEDREG), Catalonia developed two management plans for dredging fisheries: 1) Management Plan for Mechanized Dredgers (MMP) implemented through Order ARP/122/2020; 2) Management Plan for Boat Dredges (PGDE) implemented through Order ARP/188/2020. These plans introduced significant reductions in fishing effort, limiting permits, fishing days, and hours while also closing low-density fishing grounds. Additionally, a ban for *C. gallina* harvesting was enforced in 2019 due to conservation concerns.

Recognizing both the economic impact of the ban and the species' strong recovery potential, a scientific sampling campaign was conducted between May and July 2023. The data revealed a remarkable recovery of *C. gallina* stocks, with biomass levels 300 times higher than those recorded in 2017.

Based on these results, on 28 July 2023, the Directorate-General for Maritime Policy and Sustainable Fisheries (DGPMPS) submitted a request to the Secretariat-General for Fisheries to reopen the *C. gallina* banks along the Catalan coast. This request included the proposal of two pilot exploitation plans: 1) a pilot plan for mechanized dredging in central-southern Catalonia; 2) A pilot plan for boat dredging in the Ebro Delta area. Both plans were approved by the European Commission in September and October 2023, respectively. Since their implementation, ongoing monitoring has shown highly positive outcomes, with stable stocking densities, consistent size structures, and high catch volumes, according to DGPMPS.

Building on these results, in June 2024 representatives from the fishing industry requested the inclusion of two mechanized dredges in the Ebro Delta's pilot plan. This request was driven by the high shellfish stock densities already being successfully exploited by boat dredges in the area. To evaluate this proposal, a follow-up sampling campaign was conducted in October 2024. This sampling campaign consisted of a total of two hauls using mechanised dredge, which according to the fishing sector, confirmed the high abundance of *C. gallina* in the Ebro Delta, with biomass levels exceeding those recorded prior to the closure. These findings supported the fishing sector's call to allow mechanized dredging under regulated conditions.

In response to this request, DGPMPS proposed a scientifically monitored pilot plan for mechanized dredging in the Ebro Delta, aimed at ensuring controlled fishing pressure. Within the scope of the pilot plan access to the resource would be granted to vessels holding special permits for shellfish fishing with mechanised dredges. At present, the fleet consists of one vessel operating all year-round, with a second vessel operating in July-August only. The census of the current management plan establishes a maximum of 9 vessels for this area. Additional key regulatory measures include: 1) limitation of fishing area (as defined in Order ARP/122/2020); 2) controlled fishing activity with maximum catches of 200 kg per week, increasing to 400 kg per week in July–August; 3) strict quota management with 40 kg/day per vessel; 4) working day of maximum 8 hours; 5) seasonal fishing ban during the breeding period (March–May); 6) ongoing stock monitoring through scientific sampling. Similarly to the management of fishing effort, when catches fall below 50% of the recorded maximum weight, the fishing ground will be provisionally closed for a period of three months. Reopening will take place gradually and in coordination with the Monitoring Committee of the Plan.

2) A document containing the minutes of the Monitoring Committee meeting held on September 17, 2024. The committee evaluated the catch data for Venus clams under the pilot exploitation plan in the Central South area. The fishing effort applied was found to follow the plan's regulations, and the CPUE remained stable, as required to keep the fishery open.

During the meeting it was decided to conduct additional sampling to verify the stock condition in the Ebro Delta. Based on the results, they would then propose a sustainable yet economically viable maximum daily quota for the local mechanized dredging fleet.

The meeting also included a discussion on the response from STECF regarding the third-year follow-up report on the Management Plan for Mechanized Dredges. The fisheries administration announced that multiannual scientific monitoring would be contracted to comply with European Commission requirements.

The meeting concluded with an agreement to proceed with scientific sampling to assess stock conditions in the Ebro Delta. The results would guide future management measures for mechanized dredging in the region.

3) The last document provided by Spain consists of five photos of the mechanised dredges used in the Ebro Delta.

Summary of comments and conclusions made by STECF PLEN 24-02 in relation to ToR 6.7 Review of the monitoring report for mechanised dredges management plan catching bivalves in the waters of Catalonia

In January 2024, the Spanish Administration provided elements on the monitoring of the MP for mechanised dredges in the Mediterranean Coast of the Autonomous Community of Catalonia, that was adopted by the regional Order ARP/122/2020. The management plan concerned fishing activity targeting bivalves using mechanised dredges in the framework of the provisions of Article 19 of MEDREG.

STECF PLEN 24-02 was requested to review the monitoring elements provided and, if necessary, advise and assess whether the management plan for mechanised dredges catching bivalves in the waters of Catalonia contains adequate elements in terms of: 1) description of the fisheries; 2) objectives, safeguards and conservation/technical measures; 3) other aspects.

STECF reviewed the studies provided by Spain, which evaluated the most common clam resources in Catalonian waters. These studies confirmed the poor status of *C. gallina* in the region. Despite the species' low occurrence in data collected during the BIVALCAT 2019-2021 project, a new sampling campaign was conducted in May, June, and July 2023 in the Ebro Delta and the southern central coast to assess possible stock recovery. The significant recovery observed prompted the Spanish Administration to establish pilot exploitation plans for these two fishing zones. In the Ebro Delta, the pilot plan authorized 14 vessels using boat dredges.

STECF also noted that the decline in the fishing fleet actively engaged in this fishery paralleled the decrease in resource abundance, the closure of fishing areas, and the reduction in exploitable stocks. Many vessels shifted towards more profitable fisheries, such as targeting the invasive blue crab in the Ebro Delta and octopus using alternative fishing gears. This shift reflected a strategic adaptation to changing resource availability and economic viability.

However, STECF highlighted that the MP lacked defined targets or thresholds related to fishing mortality, biomass (densities), or CPUE. The only decision-making criterion currently in place is the maximum daily catch per boat.

Given the historically low biomass levels of *C. gallina*, STECF considered Spain’s decision in 2019 to close these fisheries in the Ebro Delta to be justified and appropriate.

STECF also recommended conducting additional studies to evaluate the potential impact of mechanized dredging on benthic communities associated with these fishing grounds. Furthermore, STECF reiterated its earlier recommendation (STECF 19-01) to assess the fleet's economic dependency on clams. This evaluation should analyse clam catches' contribution to the total annual income per boat, considering the alternative use of fishing gears targeting other species.

STECF endorsed the BIVALCAT project's proposal to maintain regular monitoring of clam stocks using its established survey methodology and strategy. This approach would allow the development of long-term data series, facilitating comparisons between current and future stock status.

Finally, STECF recommended that any future updates to the MP include a clearer definition of management targets and CPUE reference levels, as this would significantly improve the transparency and effectiveness of the decision-making process.

STECF comments in relation to the request to reopen the bank of *Chamelea gallina* for mechanised dredges boats in the Ebro Delta

STECF notes that the MP for mechanised dredgers, approved by the European Commission, implemented through National Regulation ARP/122/2020 of 10 July 2020, and discussed during STECF PLEN 24-02, introduces a significant reduction in the fishing impact on the resource. This is achieved through several key measures such as a decrease in the maximum number of special permits issued, a reduction in the maximum number of annual fishing days allocated to authorised vessels, as well as a further reduction in actual fishing hours due to the option of complementing dredging activity with the use of other gears.

STECF acknowledges the decision to close the *C. gallina* fishery in 2019 due to critically low stock densities. This measure was adopted in line with the precautionary approach and was intended to remain in effect until scientific evidence confirmed the full recovery of the stock.

STECF notes that the data submitted with the MP supporting the recovery of *C. gallina* stocks in the Ebro Delta originate from two main sources: 1) data collected from two hauls conducted with mechanised dredges in October 2024, and 2) catches recorded between November 2023 and March 2024 by the 14 boat dredgers operating under the pilot management plan established by Order ARP/188/2020. Based on the available data, STECF recognises a potential increase in *C. gallina* biomass in the Ebro Delta.

While the increased productivity observed in boat dredging operations is encouraging, STECF emphasizes the need to apply a precautionary approach before considering the reopening of the fishery to mechanised dredging. According to the MEDREG, the term dredges includes two distinct types of gear: 1) boat dredges, which are actively towed by the vessel's main engine, and 2) mechanised dredges, which are hauled by a motorised winch from an anchored vessel. STECF considers that understanding these differences is essential, as they imply significant operational and spatial distinctions that affect how each gear interacts with the marine environment. Notably, mechanised dredges operate from a fixed position using an anchor, while boat dredges involve continuous towing, resulting in different levels of fishing effort, selectivity, and potential seabed impact. The higher impact on the seabed of boat dredges is also reflected by Art. 13.2 of MEDREG, which imposes different

spatial restrictions on each gear type. Mechanised dredges are allowed to operate closer to shore, whereas boat dredges must maintain a minimum distance of 0.3 nautical miles from the coast. This further reinforces the need to evaluate each method separately when assessing their sustainability.

Given these differences, STECF questions whether the positive results observed from boat dredge operations can be directly extrapolated to mechanised dredging, particularly in cases where these gears operate in the different fishing grounds. Although both gears target the same clam stocks, their distinct operational characteristics necessitate gear-specific scientific data to support sound management decisions. In this context, and for future evaluations, STECF supports the implementation of a dedicated sampling plan. This plan should include a statistically significant number of hauls conducted with the gear concerned by the MP (in this case, the mechanised dredges), and it should be designed and executed following a rigorous scientific approach.

Additionally, STECF acknowledges and supports the intent of the Spanish administration to implement adaptive management measures. In particular, if catch levels drop below 50% of the recorded maximum weight, the affected fishing ground will be provisionally closed for a period of three months.

STECF conclusions

STECF concludes that the information provided on mechanized dredge sampling is limited and even though it suggests a recovery of *C. gallina* densities in the Ebro Delta region, it lacks of sufficient statistical power as to be conclusive on the degree of recovery, as it is only based on two mechanised dredge hauls. STECF acknowledges however that those results were consistent with the recovery already noticed by the mechanised dredges sampling on the southern central coast of 2023 and with the positive performance of the boat dredges operating under the pilot fishery in the area.

STECF concludes that mechanised and boat dredges, due to the distinct differences in the operational characteristics of these gears, should be evaluated separately in future requests.

STECF acknowledges the efforts made by the Spanish administration in promoting the sustainable exploitation of bivalve stocks, particularly *C. gallina*, through the precautionary closure of the fishery in the Ebro Delta.

STECF concludes that if appropriate data to support the request is provided, any policy decision to gradually reopening the Venus clam bank in the Ebro Delta should be approached cautiously. The initial phase proposed by the MP, allowing access to two vessels, is considered an appropriate step in ensuring a balanced approach between resource exploitation and conservation in this case. Furthermore, a gradual reopening would also have to be coupled with a close monitoring of the fishery to produce indicators of population abundance (with CPUE) to monitor the population trends and to inform management (as described in the pilot plan).

STECF recognises that dredges exert a significant impact on the seabed and associated benthic communities (Grati et al., 2025). As such, these fisheries warrants special attention in both their management and monitoring.

References

Grati F., Druon J.N., Gascuel D., Absil C., Bastardie F., et al. 2025. Fisheries performance indicators for assessing the ecological sustainability of wild-caught seafood products in Europe. Environmental and sustainability indicators. 26: 100632.

6.6 Evaluation of Joint Recommendation on a derogation from MCRS for Venus Clams in certain Italian waters

Background provided by the Commission

The landing obligation has been compulsory since 1 January 2017, for the species that define the fisheries (other than small pelagics) and that are subject to a minimum conservation reference size (MCRS) according to Annex IX of the Technical Measure Regulation adopted in July 2019.

The fisheries targeting the mollusc bivalve Venus clams (*Venus gallina* – as originally described – or *Chamelea gallina*) are therefore subject to this provision. Between 2019 and 2020, Italy submitted to the European Commission a proposal for a three year discard plan for the fisheries targeting Venus clams by hydraulic dredges in the certain Italian waters. Following STECF advice, a high survivability derogation was granted for 3 years and a 3 year derogation to MCRS. The latter derogation expired on 31st December 2022 and following STECF evaluation a new derogation was granted via the Delegated Regulation (EU) n. 2022/2587 of 18 August 2022 amending Regulation (EU) n. 2019/1241 of the European Parliament and of the Council as regards the minimum reference size for the conservation of Venus clams (*Venus spp*.) in certain Italian territorial water until 31st December 2025. As the current derogation is expiring at the end of the year, on 11 March the IT administration submitted a new Joint Recommendation to support the derogation from the MCRS of 25mm for Venus shells in the Italian waters of the following GSAs: 9-10-11 and 17-18. After the entry into force of the new Technical Measures Regulation (Regulation (EU) 2019/12419) Member States have the possibility to develop joint recommendations that can be used to amend certain regional baseline selectivity standards through the Commission empowerment to adopt delegated Acts on the basis of these joint recommendations. This permits the tailoring of detailed and technical rules so as to take into account regional specificities. The alternative measures should, as a minimum, lead to such benefits for the conservation of marine biological resources that are at least equivalent to the ones provided by the baseline standards. As such, the joint recommendation shall not lead to a deterioration of baseline standards and also aim at achieving the objectives and targets set out in Articles 3 and 4 of Regulation (EU) 2019/1241. The new Joint Recommendation is supported by a study which evaluates the possible effects of re-defining the MCRS.

Background documents are published on:

https://stecf.ec.europa.eu/meetings-calendar/past-meetings

Request to the STECF

STECF is requested to review and make any appropriate comments and recommendations on the joint recommendation for the fisheries targeting Venus clams in the relevant IT territorial waters of the GSAs 9-10-11- 17-18 and its supporting study focusing only on the request for an extension of MCRS derogation for 5 years . In particular, STECF is requested to:

- Assess the potential past and future (limited to a 5 year MCRS derogation duration) impacts on the stock of the proposed change in the MCRS for Venus clams from 25 mm to 22 mm on exploitation rates and stock biomass.

In making this evaluation, STECF is asked to take into account the works of the STECF EWG 15-14, 16-0625, 19-01, 19-02, PLEN 20-01, 22-01 as well as EWG 22-167 , and of the European Parliament.

Summary of the information provided to the STECF

STECF was provided with comprehensive information of the trend of the Venus clam fishery (landings, length frequency distributions, fishing fleet, fishing effort, recruitment, abundance, biomass, fishing mortality) in the Adriatic Sea since 2016, when the derogation from 25 mm TL to 22 mm TL was implemented for the first time, and on the current status of the stocks in the different maritime districts.

The documentation consists of the Joint Recommendation submitted by Italy, the MEDAC opinion on the Joint Recommendation and three annexes.

1- *Joint Recommendation - Member State Italy- Derogation to Minimum Conservation Reference Size for the mollusc bivalve Venus spp. (Chamelea gallina) in the Italian territorial waters sine die.*

The derogation of MCRS for Venus clam *(Chamelea gallina)* from 25 mm 22 mm TL was implemented in 2016 when Commission delegated Regulation (EU) 2016/23761 establishing a discard plan for mollusc bivalve Venus spp. in the Italian territorial waters, was adopted. The derogation expires on the 31st of December 2025.

Italy is proposing a new Joint Recommendation(JR), based on the results of ad hoc studies that were carried out to further demonstrate that the current derogation of the MCRS for Venus clams does not cause any detrimental impact to the ecosystem and to the stocks (Annex A).

The JR indicates that this specific derogation will be applicable to mollusc bivalve Venus clams (*Chamelea gallina*) in the Italian territorial waters, following the GFCM Geographical Sub-Areas 9,10,17 and 18. According to the JR this fishery is concentrated in the Adriatic (GSAs 17 and 18).

2- *MEDAC_parere_pdg_rigetti_&_NCRS_vongola_MASAF*

This document states that MEDAC fully supports the request of renewal of the derogation of the Venus clam MCRS.

---

7 https://publications.jrc.ec.europa.eu/repository/handle/JRC132157

3- *Annex A: Bio-ecological and technical basis for the request of derogation of the Minimum Conservation Reference Size of the Venus clam (Chamelea gallina) (Reg. (EU) n. 1241/2019 Annex 9 B REG (EU)n. 1380/2013 ART. 15). CNR- IRBIM Ancona*

This document analyses the results obtained in the seven year period after the implementation of the first Discard Plan and evaluates its effectiveness.

Annex is a comprehensive document (284 pages), with a description of the hydraulic dredge fishery, information on the biology of the species (growth, reproduction, genetics), experiments on survival (in the laboratory and at sea), observation on the status of the stocks through scientific surveys (annual in spring-summer, in the different maritime districts, starting with the first implementation of the MCRS derogation), on the implementation of the discard plan on the impact of hydraulic dredging on benthic communities. Finally, CMSY (https://aiep.pensoft.net/article/105910/) was used to assess the status of the stock in the different districts.

According to the annex provided to STECF, 568 hydraulic dredgers operate in the Adriatic at present with Venus clam as target species. In the most recent years (2018-2023) Italian landings amounted to around 20,000 tonnes (99% from the Adriatic), with a landing value of 56 million Euro. In the annex the landings data are generally presented in detail by district, year and month over the period 2007-2023 or longer.

Regarding the species biology, it is stated in the annex that sexual maturity (L50) is reached before the first year of life at about 11.2 mm TL, for both sexes pooled together, and above 15 mm TL all individuals are sexually mature. That is, MCRS of 22 mm is well above the size at first maturity. The species is a multiple-partial spawner with a protracted reproduction period, from late spring to summer, with a peak in May-July. Partial fecundity is positively related to shell size (22 mm females can release ~1.4×105 oocytes/female, while 25 mm clams produce 2.3×105 oocytes/female). It is worth noting that, despite the introduction of the 22 mm MCRS, within the commercial fraction of clams, the most representative modal classes are those around 24-26 mm or higher.

The genetic studies provided in the annex indicate that Venus clam has a high level of genetic diversity ascribable to high larval dispersal rate. This characteristic confers to this species a good adaptive potential to face the environmental perturbations. Moreover, the high genetic variability observed in the study suggests the fishing pressure did not negatively affect its genetic diversity.

The provided survival experiments carried out in the laboratory and at sea demonstrate high survival rates, 94.8% and 96.2% respectively, which suggests that discarding might have a limited impact.

The attached surveys were carried out annually in all districts between 2017 and 2023 and highlights a general good status of the resource in most of the compartments. Overall, an

increase of the commercial biomass over 2017-2023 was observed in 10 out of 13 districts: Chioggia-Venice, Ravenna, Rimini, Pesaro, Ancona, Civitanova, San Benedetto, Manfredonaia and Barletta. In Pescara, Ortona and Termoli a decreasing trend was instead detected. The commercial fraction represents a small fraction of the total and annual good recruitment is generally observed.

The annex reports that the selection is carried out firstly on the seabed by the dredge itself, and on board using a vibrating sieve, which consists of multiple grids. The dredge catch is processed on board and sorted mechanically into different commercial classes by the vibrating sieve, while discard (small clams) and other species without commercial interest are thrown directly back into the sea. The selection has improved in such a way that the re-stocking areas at present have been used only marginally.

With the implementation of the Discard Plan a number of measures were adopted, which include among others, equipping vessels with position detection systems, defining restocking areas, and introducing a certification system to ensure that products meet the minimum conservation reference size at landing points.

The annex shows that fishing effort has been reduced through the implementation of a number of measures. Among them it is worth mentioning the reduction of the daily quota by vessel from 600 to 400 kg, which combined with the possibility of landing 22 mm clams makes the daily quota be reached more quickly, reducing on average from 4.2 hours/day prior the adoption of the Discard Plan to 2.4 fishing hours per day. In turn, this reduction in fishing hours has decreased the extent of dredged areas and allowed longer closures of certain areas (rotating closure areas). Catch per fishing hours has generally increased. An overall increase in commercial biomass resulted in a rise in fishing days, with the exception of Chioggia-Venice, Ravenna, Ortona and Termoli districts. In the North-Adriatic this decline was driven by massive mortality events, resulting from adverse environmental events. In addition, the number of fishing days per week was reduced to 4.

As for the impact on the environment, the fishing activity of hydraulic dredgers targeting Venus clams is reported to have been taken place in an area dominated by *Chamelea gallina*, where this species makes up over 90% of the total biomass of all species present. The rotation of fishing areas allows for long periods of rest, enabling the macrobenthic community to recover within 2-6 months. It is indicated that generally, no species caught in these areas face conservation issues or are protected. Soft-shelled or soft-bodied species were the most affected by the harvesting process, while thick-shelled or thick-bodied species experienced minimal damage. Notably, the species most affected by damage were the sea urchin *Echinocardium cordatum* (>84%) and the bivalve *Mactra stultorum* (>32%). The overall mortality rate for discarded individuals was 22.9%, with *E. cordatum* showing the highest mortality rate at 96%.

Each fishing district operates and has fishing rights exclusively in its own territory (maritime district). Therefore, there is no competition between the parties who hold territorial rights and those who practice fishing outside the borders, which makes the management efficient and reactive to short term local population trends.

Environmental factors (storms, rising sea temperatures, hypoxia, harmful algal blooms) seem to be the primary limiting factors affecting the status of Venus clam, surpassing the impact of fishing activity. Nevertheless, the resilience of the species after adverse massive mortality events is emphasized in the annex.

The status of the stock in each district was assessed using CMSY. It is indicated, though, that the results should be interpreted with caution and that in the coming years, with the expansion of the time series, other assessment methods will also be explored. According to the assessment results, catches have generally remained around the MSY, which would suggest, overall, that current management practices help prevent overexploitation. Reduction in fishing effort would be desirable in some cases because of F/FMSY too high some years and Biomass too low compared to BMSY.

4- *Annex Abis - Bibliography_References_for_Clams_Magement_Plan_2025*

Annex Abis consists of eleven recent publications on the different issues dealt with in Annex A: reproductive biology and MCRS (Bargione et al. 2021B); survival (Bargione et al. 2021); shell damage and survival (Bargione et al. 2023); discarded macrobenthic fauna (Bargione et al. 2024); Venus clam age and growth (Bargione et al. 2020); genetic diversity (Carducci et al. 2020); hydraulic clam dredging (Carlucci et al. 2024); hydrodynamic changes and Venus clam abundance (Cascione et al. 2023); Venus clam calcification (Mancuso et al. 2019); Venus clam physiological performance (Moschino et al. 2023); hydraulic dredges impact (Cascione et al. 2022).

5- Annex B: National Discard Management Plan for the Venus spp. (*Chamelea gallina*) (ART. 15 EU REG. (UE)n.1380/2013) 2025

This document details the measures Provided by the National Discard Management Plan for Venus clam (*Chamelea gallina*). These include:

- Minimum Conservation Reference Size for the Venus clam (22 mm), in force until 31 December 2025.
- The 5% weight tolerance on the minimum conservation reference size is eliminated.
- 4 fishing days per week.
- Maximum daily catch of 400 kg per vessels, with no tolerance.
- Clams catch are to be landed at the designated landing point.
- Screening system at the landings points to ensure that only commercially sized clams (≥ 22 mm) are selected.
- Screening operations at different levels. First on board and after landing supervised by the Management Consortia, that issues a certificate confirming the compliance with the minimum size requirement.
- Measures related with the monitoring of the fishing fleet
- Measures related with control throughout the entire fishing process and monitoring and transfer of undersized clams to the designated restocking areas.

The implementation of this plan is expected to be carried out with the active participation of all mollusc management consortia, supported by adequate scientific assistance and under the oversight of the competent authorities (MASAF, Maritime Authorities).

The duration of the plan is proposed to be indefinate, with an adaptive approach based on the outcomes of the scientific evaluations.

STECF comments

STECF notes that requests regarding the Venus clam fishery in Italian waters have been reviewed in previous STECF plenary meetings. PLEN-22-01 provided a comprehensive summary of the previous evaluations by STECF i.e from STECF-16-06, STECF PLEN-19-01, PLEN-19-02 and PLEN-20-01.

Summary of previous STECF advice

Extract from PLEN-22-01:

"STECF 16-06 evaluated a proposal submitted by Italy for a three-year discard plan for the fisheries targeting Venus clams by hydraulic dredges in the Northern Adriatic Sea. Based on the STECF advice, Delegated Regulation (EU) 2016/2376 of 13th October 2016, established a discard plan for mollusc bivalve Venus spp., in the Italian territorial waters. This plan derogated from the minimum conservation reference size of *Chamelea gallina* established in Annex III to Regulation (EC) No 1967/2006, with a MCRS of 22mm instead of 25mm. This discard plan had a lifespan of three years from 1 January 2017 and expired on 31 December 2019.

In 2019 Italy submitted a proposal for a further three-year discard plan that aimed to extend the derogation for the reduced MCRS of 22mm and also included a high survivability exemption to allow discarding of Venus clams below 22mm. STECF PLEN 19-01 and 19-02 evaluated this proposal and the supporting information supplied. Although both evaluations concluded that the past and predicted future impacts of the proposed change in the MCRS on exploitation rates and stock biomass could not be fully assessed with the information provided, STECF 19-02 concluded nevertheless that the request for a continuation of the reduction in MCRS of Venus clam (*Chamelea gallina*) from 25 mm to 22 mm until 31 December 2022 seemed reasonable from a biological perspective. STECF PLEN 19-02 also concluded that the revised JR submitted attempted to respond to the observations made by STECF PLEN 19-01 on the weaknesses in the original survivability studies. Based on the STECF 19-02 advice, the high survivability exemption was granted for 3 years up until 31 December 2022 and the derogation to the MCRS was granted for 1 year until 31 December 2020 pending further supporting information being submitted by the Italian administration (Delegated Regulation (EU) 2020/3).

In 2020 the Italian administration submitted a new Joint Recommendation supported by a study which evaluated the possible effects of re-defining the MCRS. STECF PLEN 20-01

evaluated the recommendation and concluded that the documentation on exploitation rates or stock biomass trends for Venus clams in Italian waters only related to the Veneto region. Little information on exploitation rates or stock biomass was provided for the main fishing grounds (Marche region). Given the paucity of such information, STECF was therefore unable to fully assess the potential past and future impacts of the proposed change in the MCRS for Venus clams from 25 mm to 22 mm on exploitation rates and stock biomass. On the basis of the information provided, STECF could not disentangle the impact of the change of MCRS alone from the impact of the entire management plan and accompanying measures. In general, reducing the MCRS is unlikely to ensure the protection of juveniles as required by Article 18 of Regulation (EU) No 2019/1241. However, given that the size at first maturity of Venus clams is below 22 mm, a reduction in MCRS to 22 mm is likely to have little effect on the exploitation rate on juveniles.

STECF PLEN 20-01 noted that the status of the stocks seems to have been stable or improving in those areas for which sufficient information is available (Veneto). STECF could not assess whether this was related to the implementation of the management plan, or to natural fluctuations in populations. STECF concluded however that the management plan includes provisions which are likely more effective for the management of the exploitation rates on Venus clam populations than the conditions prevailing before 2017.

Finally STECF PLEN 20-01 noted that the statement that if the derogation on the MCRS from 25 mm to 22 mm were not granted higher effort and quota will result, was not evidenced or supported. Incidentally, STECF noted that the reference used for estimating maturity at 15-17 mm was already ancient (Polenta, 1993) and considered that it would be beneficial to perform updated maturity analyses to verify whether these estimates were still valid. STECF considered that the methodology used to generate the survival estimates was robust."

STECF PLEN-22-01 Conclusions:

"STECF commends the comprehensive amount information presented in support of the Join Recommendation for the Derogation to the Minimum conservation reference size of Venus clam. This systematically addressing all the key elements of the Management of these hydraulic dredge fisheries. Most of the suggestions made by STECF PLEN 20-01 have been followed and expanded.

On these key elements, STECF concludes the following:

On the assessment of stock trends and harvest rates:

STECF concludes that information from the regional surveys carried out since 2017, as well as the extended time series for some regions, show various biomass status and trends for the different areas, which might be partly due to natural fluctuations and partly due to the management plan and to the new MCRS at 22 mm for which extension is required.

For the 4 (out of 13) regions with poor or decreasing stock status, STECF cannot conclude whether this is related to the implementation of the management plan, or to natural

fluctuations in populations due to environmental phenomena. STECF re-iterates its previous conclusion that the management plan includes measures, which are likely more effective for the management of the exploitation rates on Venus clam populations than the conditions prevailing before 2017.
STECF concludes though, that the elements provided do not allow STECF to assess the future impacts of the proposed change in the MCRS for Venus clams from 25 mm to 22 mm on exploitation rates and stock biomass. STECF concludes that population modelling integrating all the valuable new knowledge presented would be needed to evaluate future impacts and to disentangle the relative effect of the MCRS from the other effects of the plan and of environmental factors.

STECF also concludes that long time series of abundance indices are useful and encourages to, where possible, collate data prior to 2017 in regions where this data is still lacking.

On the impact on juveniles of the JR for changing the MCRS

STECF considers the comprehensive scientific research on growth, maturity and reproduction, discard survivability and fishery monitoring is sufficient to conclude that Venus clams catches are made up of adults and that discarded undersized clams are primarily adults which will survive after re-burying in the seabed. Therefore, STECF concludes that the immature fraction of the Venus clam population is globally unaffected by this fishery with the current derogation of the MCRS, and that reducing MCRS from 25 mm to 22 mm, is still consistent with the objective of ensuring the protection of juveniles, as required by Article 18 of Regulation (EU) No 2019/1241.

On the impact of the fishery and the new MCRS on the bottom

Regarding the compliance with Article 3 (2e) of Regulation (EU) No. 2019/1241, requiring the specific technical measures to achieve the objective of minimizing negative environmental impacts of fishing on marine habitats, STECF concludes that the studies reported seem to show that the impacts on the habitats are not major or irreversible as current benthos communities can be compared with those recorded in previous decades ago. However, STECF highlights those impacts can be severe for some soft-bodied or soft-shelled species being caught by the dredges used in the fisheries. Therefore, STECF therefore endorses the regular monitoring of benthos communities to assess their evolution in terms of diversity and species composition.

STECF acknowledges that the rotation of fishing grounds, once every 4-6 months, as currently implemented for the management of the Venus clam fishery, may be a key element in preserving and allowing restoration of benthos communities. STECF concludes that integrated modeling based on the new knowledge collected may help better quantify minimum elapse time for rotation of fishing activities over the same fishing grounds for each region, based on growth and benthic community regeneration rates.

On the economic impact on the effects of rejecting the JR for changing the MCRS

STECF acknowledges that the dependency of the catches from the fleets involved catches on Venus clam between 22 and 25 mm is substantial, and that reverting to the old MCRS of 25 mm would have a negative impact on the economic performance of the fishery, and probably on the amount of realized effort (in terms fishing hours per day) and discards.

On future research

STECF endorses the continuation of pilot studies on improving the selectivity and reducing the amount of by catch of other benthic species and damage to such species. These studies have provided promising results (as reported for several case studies in Annex E).

STECF agrees with the JR considerations that a better measurement of effort based on the number hours fishing should be set up for the monitoring of the fishery.

STECF concludes that the great amount of knowledge available on growth, maturity, spawning potential and selectivity would allow more advanced population modelling and scenarios analysis to support the management plan."

STECF-22-16 Conclusions of the assessment:

"Venus Clams 17 & 18. The evaluation concentrates on data from GSA 17. The data is limited in time but has a useful spatial component. With a few minor exceptions the area based survey estimates are limited to the last five or six years. The longer term catch data is available aggregated to GSA but by subarea for recent years. A CMSY model is fitted by sub area while it does not capture the short term variability it does indicate that a general status can be obtained by this method. The information on current status is predominantly being obtained from the combination of long term reduction in average catch over the longer term combined with length indicators in the last year. However, the contrast in the length indicators is small and so far it is unclear how good they are at determining MSY status. Nevertheless it is possible to draw some general conclusions from the evaluations. The overall perception for the 9 stocks with assessments, is of exploitation rates that have declined over the long time series of catch. However, it's hard to know what has happened in individual areas as partitioning of historic catch is based only on recent data. Three districts have insufficient data to carry out evaluations. No catch advice is provided as this requires more detail in the last years than these models can produce. It seems that local area management sensitive to local catch trends would be preferable to any broad scale control. Though setting data and exploitation target standards to be implemented locally may be a good approach."

<u>PLEN 25-01 comments</u>

STECF notes that the results of the different studies provided to PLEN 25-01 point to the successful implementation of the MCRS derogation to 22 mm TL, in general terms. The landings have remained fairly stable in the last years, around 20,000 tonnes and an overall increase in commercial biomass in most of the districts resulted in a rise in fishing days. The species appears to be highly resilient to adverse environmental conditions, which would be

explained by the combination of high level of genetic diversity, early maturity and high fecundity. Furthermore, the selectivity (firstly of the dredge, and subsequently on board with sieves) is highly efficient, which tends to minimize the impact of the gear on the resource.

According to the information provided to STECF, adverse environmental conditions (storms, rising sea temperatures, hypoxia, harmful algal blooms) would be the primary limiting factors affecting the status of Venus clam, surpassing the impact of the fishing activity.

STECF observes that the entry into force of Regulation (EC) 1967/2006, which banned hydraulic dredging within 0.3 miles of the coast, resulted in a significant reduction of the exploitable areas, which effectively halved the potentially exploitable areas. As a result, a collapse of the fishery took place (Luchetti et al. 2022). Clams are harvested with hydraulic dredges which operate within a narrow strip between 0.3 and 2 nautical miles (nm) from shore, although high densities for commercial use are normally concentrated within 1 nm of the shore (Luchetti et al. 2022). At present, according to the provided documentation to STECF, the data collected during the surveys show a negative correlation between Venus clam densities and the distance from the coast, highlighting the importance of the area within 0.3 nm as a useful basin for maintaining the reproductive potential of the stock, and thus, fishing with hydraulic dredges should remain to be forbidden (Annex A).

STECF notes that according to the information provided to STECF, despite the fact that partial fecundity is positively related to shell size and at individual level, 22 mm Venus clam will produce around 40% less oocytes than 25 mm females and annual recruitment has been good in general since the implementation of the first discards plan in 2016.

STECF notes that the surveys that were conducted in the different districts over a six, seven or eight years period, depending on the district, show stable LFDs, with good annual recruitments, and that the commercial clams (≥ 22 mm) represents a small fraction of the total in all cases. Thus, for instance, in districts of higher catches in 2023, as in the Chiggia-Venice districts, over the period 2016-2023, the commercial-sized clams ranged between 4 and 14%; in Pesaro over 2018-2023, the commercial clams represented between 4 and 22%; and in Ancona, over 2017-2022, the undersized fraction was consistently larger than the commercial one (always bigger than 72%).

STECF observes that selectivity has improved since MCRS of 22 mm was implemented for the first time, in such a way that there are now not enough clams retained on board to support meaningful seeding operations for restocking purposes and restocking areas have been used only marginally.

STECF notes that seven years after the first derogation of the MCRS and the implementation of the management measures defined in the Discards Plan, Venus clam landings appear to be stabilized around 20,000 while biomass has increased in several districts. According to the assessment results, catches have generally remained around MSY, which would suggest, overall, that current management practices has help prevent overexploitation of Venus clams.

STECF conclusions

STECF commends the comprehensive information presented in support of the Joint Recommendations for Derogation to the MCRS of Venus clam, which updates the information submitted to PLEN-22-01. It addresses the key elements needed to assess the request of the MCRS derogation to 22 mm.

STECF concludes that despite the reduction of MCRS to 22 mm in 2016, SSB level appears to be healthy as good recruitment was observed in most of the maritime districts and within the commercial catch.

STECF concludes that provided that the management measures continue being implemented as in previous years and that there are no major environmental disturbances, it is reasonable to assume that in the next five years the impacts on the Venus clam stock in the Adriatic on exploitation rates and stock biomass will follow trends similar to those observed since the implementation of 22 mm MCRS.

STECF concludes that an assessment of the results from the implementation of 22 mm MCRS in five years is necessary to allow for any potential modification of the Management Plan and to track the evolution of the stock in the different maritime districts.

References

Scientific, Technical and Economic Committee for Fisheries (STECF) – 69th Plenary Report (PLEN-22-01). EUR 28359 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-51973-7, doi:10.2760/192738, JRC129241.

Scientific, Technical and Economic Committee for Fisheries (STECF) – Stock Assessments: demersal stocks in Adriatic, Ionian and Aegean Seas and straits of Sicily (STECF-22-16). Publications Office of the European Union, Luxembourg, 2023, doi:10.2760/25344, JRC132157.

Lucchetti A, Bargione G, Barone G, Virgili M. 2022. Chapter 3: Italian striped venus clam fisheries management: an ecosystem approach to fisheries-like system for the Mediterranean mollusc sector. In: Vasconcellos, M. and Ünal, V., eds. 2022. Transition towards an ecosystem approach to fisheries in the Mediterranean Sea – Lessons learned through selected case studies. FAO Fisheries and Aquaculture Technical Paper No. 681. Rome, FAO. https://doi.org/10.4060/cb8268en

Publications in Annex Abis

Bargione _G, Donato F, Barone G, Virgili M, Penna P, Lucchetti A. 2021, Chamelaea gallina reproductive biology and Minimum Conservation Reference Size: implications for fishery management in the Adriatic Sea. BMC Zoology https://doi.org/10.1186/s40850-021-00096-4.

Bargione G, Petetta A, Vasapollo C, Virgil M, Lucchetti A. 2021. Reburial potential and survivability of the striped venus clam (Chamelea gallina) in hydraulic dredge fisheries. Scientific Reports 11:9109 https://doi.org/10.1038/s41598-021-88542-8

Bargione G, Barone G, Virgili M, Lucchetti A. 2023. Evaluation and quantification of shell damage and survival of the striped venus clam (Chamelea gallina) harvested by hydraulic dredges. Marine Environmental Research 187 (2023) 105954

Bargione G, Guicciardi S, Virgili M, Barone G, Lucchetti A. 2024. Damage assessment on the discarded macrobenthic fauna in the Italian striped venus clam (Chamelea gallina) fisheries. Mediterranean Marine Science doi: 10.12681/mms.36618

Bargione G, Vasapollo C, Donato F, Virgili M, Petetta A, Lucchetti. 2020. Age and Growth of Striped Venus Clam Chamelea gallina (Linnaeus,1758) in the Mid-Western Adriatic Sea: A Comparison of Three Laboratory Techniques. Frontiers in Marine Science doi: 10.3389/fmars.2020.582703

Carducci F, Biscotti MA, Trucchi E, Giuliani ME, Gorbi S, Coluccelli A, Barucca M, Canapa A. 2020. Omics approaches for conservation biology research on the bivalve Chamelea gallina. Scientific Reports 10:19177 https://doi.org/10.1038/s41598-020-75984-9

Carlucci R, Cipriano G, Cascione D, Ingrosso M, Barbone E, Ungaro N, Ricci P. 2024. Influence of hydraulic clam dredging and seasonal environmental changes on macro-benthic communities in the Southern Adriatic (Central Mediterranean Sea). BMC Ecology and Evolution https://doi.org/10.1186/s12862-023-02197-9

Cascione D, Turco C, Amodio S, Ingrosso M, Cipriano G, Carlucci R, Maiorano P, Ricci P. 2022. Observations on benthic assemblages impacted by hydraulic dredges in the Southern Adriatic Sea (Central Mediterranean Sea). Authorized licensed use limited to: CNR AREA RICERCA DI BOLOGNA. Downloaded on January 16,2025 at 11:17:47 UTC from IEEE Xplore. Restrictions apply.

Cascione D, De Padova D, Mossa M, Dragone V, Cipriano G, Ingrosso M, Carlucci R, Ricci P. Do hydrodynamic changes affect abundances of the striped Venus clam? A preliminary analysis in the Southern Adriatic Sea. 2023. Authorized licensed use limited to: CNR AREA RICERCA DI BOLOGNA. Downloaded on January 16,2025 at 11:24:57 UTC from IEEE Xplore. Restrictions apply.

Mancuso A, Stagioni M, Prada F, Scarponi D, Piccinetti C, Godoffredo S.2019. Environmental influence on calcification of the bivalve Chamelea gallina along a latitudinal gradient in the Adriatic Sea. Scientific Reports 9:11198 https://doi.org/10.1038/s41598-019-47538-1

Moschino V, Rizzo G, Marceta T, Cernigal F, Masiero L, Da Ros L, Marin MG. 2023. Biochemical composition and reproductive cycle of the clam Chamelea gallina in the Northern Adriatic Sea: an after-10-year comparison of patterns and changes. Frontiers in Marine Science DOI 10.3389/fmars.2023.1158327

6.7 Assessment of the Joint Recommendation for haddock

Background provided by the Commission

The Scheveningen Group submitted a Joint Recommendation on 30 October 2024 requesting an amendment to the current discard plan for the North Sea and further technical measures in the North Sea as provided for in Article 15(5) b, ii, of the basic regulation and Article 15(2) of Regulation (EU) No 2019/1241. The JR requests for the use of a T90-cod-end to be permitted for vessels fishing with bottom trawls and seines in fisheries in the whole, as well as for a de minimis exemptions for haddock below MCRS up to a maximum of 1.5% of the total annual catches of haddock in the ICES division 3A. It should be noted that a joint recommendation from the Scheveningen Group on De minimis exemption for Haddock was examined during STECF PLEN 23-03 and by EWG 23-04, which conclusions were reviewed by STECF 23-04 & 23-06.

There has been observations by fishers of an increased abundance of haddock below MCRS since 2021. According to fishers, mesh size does not have any significant impact on reducing unavoidable bycatches of haddock as the bycatch of juvenile haddock gets trapped among the larger fish. A larger mesh size would therefore result in a loss of catch of the targeted species. The Scheveningen Group's request is based on the fact that the fishing gears on which the exemptions are conditioned provide the best possible selectivity.

To support the JR, the Scheveningen Group submitted a report from the Danish Institute for Aquatic Resources (DTA Aqua). This report evaluated trials aimed to reduce bycatch of juvenile roundfish while maintaining marketable flatfish. This report concluded that that the T90-cod-end reduced the retention of juvenile roundfish and improved the retention of smaller sized marketable flatfish. The scientific trial further documented a significant reduction of cod and haddock up to a size of 43 cm and 40 cm, respectively.

Background documents are published on:

https://stecf.ec.europa.eu/meetings-calendar/past-meetings

Request to the STECF

The STECF is requested to assess the present Joint Recommendation and its supplementary annexes. Specifically, the STECF is requested to review and make any appropriate comments and recommendations on (1) the proposed technical measures, and (2) the De minimis exemption for haddock taking account of the conclusions issued by STECF PLEN 23-03 and STECF 23-04 & 23-06.

Summary of information provided to the STECF

The information provided to STECF consisted of:

1. The JR: "Joint Recommendation of the Scheveningen Group concerning technical measures for the conservation of fishery resources of the North Sea and for an amendment specifying details of implementation of the landing obligation for certain fisheries in the North Sea 2024-2027" submitted on 30 October 2024.

   The JR contained two requests:

a) "A *de minimis* exemption for haddock below MCRS in demersal fisheries by vessels equipped with electronic monitoring systems, including CCTV or vessels equipped with Seltra panel with 300 mm square mesh as defined in Article 2, using bottom trawls (OTB, OTT, TBN, PTB) with a mesh size equal to or larger than 90 mm and using either a T90 cod-end or replacing the upper trawls with 800mm mesh sizes (DragLess), in the Union waters of ICES division 3A: a quantity of haddock of up to a maximum of 1,5 % of the total annual catches of haddock in ICES division 3A."
The JR suggests that the following definition are to be inserted in Article 11(1) of Commission delegated regulation (EU) 2023/2359:

"The Seltra panel with 300 mm square mesh:

- Consists of a top panel of at least 300 mm mesh size (square mesh) placed in a four-panel section consisting of four panels of equal width and at least six meters length. The two side-panels and the bottom panel shall be made of diamond mesh of at least 90 mm mesh size.
- Is at least 3 meters long,and consists of 3 open meshes in width.
- Is positioned no more than 3 meters from the cod line.
- Is the full width of the top sheet of the trawl (i.e. from selvedge to selvedge)."

b) that fishers are permitted to use, in the Skagerrak, the Kattegat and in ICES area 4 only north of the 55th parallel, a T90 cod-end on trawls with the mesh sizes required in Annex V, part B of Regulation (EU) N°2019/1241.
The request applies for the following bottom trawls and seines: OTB, OTM, OTT, PTB, PTM, SDN, SPR, SSC, TB, TBN, TBS.

2. Feekings, J.P., Avşar, E., Bak-Jensen, Z., Bertelsen, S.K., Diernæs, L., Frandsen, R.P., Herrmann, B., Karlsen, J.D., Krag, L.A., Svantemann, M.M., Machado, L., Malta, T.V., Melli, V., Nielsen, M.M., O'Neill, B. & Savina, E. (2023). Development of selective gears and technologies for commercial fisheries (SELEKT). DTU Aqua Report no. 441-2023. National Institute of Aquatic Resources, Technical University of Denmark, 38 pp. + app.

   The report consists of brief summaries of various gear trials from DTU Aqua of which some were of relevance for the current JR requests.

3. Feekings, J.P., Krag, L.A. (2024). Faglig vurdering af selektivitet af kuller i Kattegat. DTU Aqua notat 6 pp (the note included a link to a previous study: Krag, L.A.,

Herrmann, B., Feekings, P.J., Karlsen, J.D. 2016. Escape panels in trawls – a consistent management tool? Aquatic Living Resources 29 (3)no. 306).
A short note with expert opinions from DTU scientists with regards to some aspects of haddock selectivity.

4. Anonymous 2023. Electronic monitoring in the Danish Kattegat (3AS) Nephrops fishery - Full evaluation of the project. Danish Fisheries Agency 78 pp.

   The report summarises a three year pilot project on electronic monitoring on some of the Danish Nephrops trawlers in the Kattegat, and also provides some information on associated catches of other demersal species caught alongside haddock. However, this information was limited, with minor spatial and fleet coverage compared scope of the proposed de minimis exemption.

5. NSAC Advice on amendment of the Discard Plan for the North Sea regarding a *de minimis* exemption for haddock and T90 gear. 2025. NSAC Advice Ref. 04-2425. 4 pp.

   The NSAC is generally supportive of the *de mimimis* request. NSAC also supports the inclusion of the T90 codend, and emphasizes that it is important for the industry to have several legal gear options to choose from. However, the NSAC caution against expanding the use of T90 without further research on various species of interest and therefore proposes to limit the area to the Skagerrak and Kattegat and area 4 of the North Sea only above the 55th parallel north (this is in contrast to the original JR that included a larger area in the North Sea).

6. The outcome of an *ad hoc* contract assessing the JR described above: “Evaluation of a joint recommendation by the Scheveningen Group on a *de minimis* exemption for haddock, and amendment of the Technical Measures Regulation regarding T90” (Ad hoc contract no. 2513).

The terms of references for the ad hoc contract were:

1. Deliver an assessment of the pertinence of the proposed measures described in the joint recommendation and the respective annexes as submitted by the Scheveningen Group and in particular, as regards the proposed technical measure on T90 trawl:
   a. To assess the impact of the proposed measure on selectivity (at least equivalent or increased), compared to the existing technical measures in the geographical area in question.
   b. To assess whether the technical specifications of the proposed technical measure are appropriate, or should be adjusted, to achieve an increase in by catch reduction.
   c. To assess whether the supporting material and methods used may be considered adequate and fit for purpose, and whether data and information submitted are considered robust and sufficient.
2. In the event that the contractor identifies shortcomings in the joint recommendation, it is requested to provide guidance on whether these can be overcome through further work and if so, the specific elements that should be considered.

The expert shall take into account of previous conclusions issued by STECF on the matter.

In the ad hoc contract report the evaluation of the JR is presented following a format of previous STECF work to evaluate the Joint Recommendations (EWGs 15-10, 16-10, 17-08, 18-06, 19-08, 20-04, 21-05, 22-05, 23-04, 23-06, 24-04; and STECF PLEN 14-02, 19-02).

The general observations reported by the *ad hoc* contractor were:

- The amendments proposed in the JR fall into two categories: a *de minimis* exemption and an addition to the technical measures regulation.
- The ad hoc contractor noted that no Member State provided the calculated *de minimis* volumes, or an overview of discard rates for the affected fleets
- Using a combination of the information in the JR, ICES advice and FDI data the impact of the proposed exemption could be better evaluated.
- As highlighted by EWG 24-04, *de minimis* exemptions can provide an incentive for vessel operators to continue discarding unwanted catches at sea and only retain unwanted catches on board if they are inspected on hauling. The lack of reporting and recording of unwanted catches discarded would strongly suggest this is the case.

For the *de minimis* request the ad hoc contractor concluded that:

- The information provided does not objectively demonstrate the JR's suggested challenges to improve selectivity, or associated disproportionate costs. Therefore, the *de minimis* exemption proposed in the JR does not meet the criteria for implementation. The relationship between the *de minimis* volume requested and the level of unwanted catches is unclear from the information provided to support the exemption. In some cases, the *de minimis* volume covers 100% of the unwanted catches, usually in fisheries where the levels of unwanted catch are small. In other cases, the *de minimis* volume covers only a small part of the unwanted catches and the supporting information should contain indications on the measures to be taken to reduce these residual unwanted catches.
- Improving selectivity or implementation of avoidance methods to reduce unwanted catches of haddock should be the priority.
- Future JR submissions on this subject should:
    - Use the template developed by STECF to submit fleet data including the discard estimates for all relevant fleets in the fishery.
    - Provide information on the associated landings profile of the fleets and fishing operations where the *de minimis* is required.

As regards the proposed amendment of the Technical Measures regulation the ad hoc contractor concluded that:

- The information provided in the JR objectively demonstrates the potential selectivity gains which can be made with the addition of T90 cod end in the technical measures regulation for the North Sea.
- The proposed amendment to the technical measures regulation would bring the North Sea in line with adjoining areas (Baltic and North Western Waters) where the codend is already part of the Technical Measures Regulation.

STECF comments

STECF notes that the ad hoc contractor adequately addressed both terms of references: (1) assessment of the pertinence of the proposed measures including whether the supporting material and methods used may be considered adequate and fit for purpose, and whether data and information submitted are considered robust and sufficient, and (2) In the event that shortcomings are identified, to provide guidance on whether these can be overcome through further work and if so, the specific elements that should be considered.

Amendment of technical measures

STECF notes that the results of the studies provided to STECF are in line with existing literature concluding that turning the meshes 90 degrees (from T0 to T90), maintaining everything else equal, in general increases the size selectivity for roundfish species such as cod and haddock.

With regards to the proposed amendment of the technical measures regulation, STECF notes that the proposed wording is potentially ambiguous ("*Subject to the measures laid out in this Regulation, the use of a T90 cod-end may be used for vessels fishing with bottom trawls and seines in fisheries in Skagerrak, in the Kattegat and in ICES area 4 only north of the 55th parallel")*.

One interpretation of this statement is that a T90 codend (of the same mesh size as in the conventional codend) can be used as an alternative to any minimum mesh size/target species combination (including mandatory escape panels where applicable) in Annex V, part B of Regulation (EU) N°2019/1241. STECF considers that such an interpretation lacks solid scientific support in terms of at least equivalent selectivity compared to the currently legislated gears. This is because the provided background studies compared size selectivity of a T90 codend with either that of a conventional diamond mesh (T0) codend of the same mesh size, or that of a combination of escape panel (140 mm square mesh) mounted in a diamond mesh codend of a smaller mesh size (105 mm) than the T90 codend (120 mm). STECF considers that no evidence has been provided that a T90 codend of a certain mesh size (<120 mm) exhibits equal or better size selectivity than a baseline conventional diamond mesh codend of the same mesh size that is equipped with a mandatory large mesh SELTRA escape window.

Another interpretation of the statement, which STECF considers to be supported by the scientific studies, is that a choice to use a T90 codend does not mean that the obligation to also use the currently prescribed escape panels, in trawls and seines with mesh sizes smaller than the North Sea baseline mesh size (120 mm), is overruled.

De minimis exemption for haddock below MCRS

STECF notes that according to ICES (ICES 2024), the haddock stock in Subarea 4, Division 6.a, and Subdivision 20 (North Sea, West of Scotland, Skagerrak) is in good condition with fishing mortality well below Fmsy, Fpa, and Flim, and historically high spawning-stock size (above MSY Btrigger, Bpa and Blim). Notably, haddock in 3AS (the Kattegat) where this request partly applies to, is outside the stock area but is included under the 3a TAC.

STECF notes and agrees with the ad hoc report that no or limited information about catches (including discards) and other important data about relevant fleets relevant for the derogation was provided with the JR. STECF commends the initiative by the ad hoc contractor to attempt to extract relevant catch and fleet data from other data sources (ICES and FDI) to enable this evaluation.

STECF observes that, as in the previously reviewed JR (PLEN 23-03), information about the relationship between the *de minimis* volume and the actual level of unwanted catches is lacking in the revised proposal. STECF considers that the proposed exemption is another case where the *de minimis* volume of unwanted catches that could potentially be discarded under the exemption is below the level of unwanted catch as reported by ICES/FDI (1.5% *de minimis* compared to a 30-40% discard rate of haddock for the relevant fleets as shown in the ad hoc analysis). STECF considers that none of the conditions for being eligible for the exemption (Electronic Monitoring or use of other trawl alternatives) is likely to bring the volume of undersized haddock down to levels that are in line with the allowed *de minimis* level.

STECF notes that the justification for the *de minimis* has changed from disproportionate costs in the JR version evaluated by PLEN 23-03, to difficulties to increase selectivity. STECF considers that the information provided does not demonstrate the JR's suggested challenges to further improve haddock selectivity, which is the conditionality referred to in the JR. In fact, the supporting information provided by DTU Aqua (papers 2 and 3) presents a number of options to reduce unwanted catches of haddock and also states that haddock is a species that reacts most efficiently to selective devices, a conclusion STECF concurs with.

STECF notes that the joint recommendation also intends to use the *de minimis* as a mean to incentivize the participation in a electronic monitoring programme or the use of alternative more selective trawl designs. STECF recalls that EWG 23-0406 categorised existing exemptions and identified a number of exemptions with a similar intention. Current North Sea examples are Art 11.1(b-d) and 11.1(f) of Commission delegated regulation (EU) 2023/2359).

STECF notes that there is no information provided of the likely uptake and how many vessels would be able to use the exemption under the electronic monitoring programme. Furthermore, EWG 23-0406 concluded that the assumption that electronic monitoring will lead to behaviour change that will mitigate the problem was unsubstantiated. STECF notes that the supporting information to the current JR (paper 4) provided new information showing that vessels participating in a voluntary Danish EM-program 2021-2023 complied better with the landing obligation in terms of documentation and reporting of unwanted catches.

STECF agrees with the ad hoc contract that the use of a 300 mm SELTRA in combination with >90 mm T90 is underpinned scientifically and will in general improve selectivity of roundfish and small flatfish.

STECF considers that the effect of introducing the DragLess trawl (800 mm upper panel/trawl roof) in the fishery is not sufficiently documented in the JR. This is because the only trial mentioned used 40 mm codend liners in both test and control trawls (Krag et al. preprint), which is sufficient for isolating the selectivity of the DragLess panel itself. The experimental set-up however makes a comparisons of selectivity of the DragLess trawl to the currently legislated gears, which have larger mesh sizes and mandatory SELTRA escape panels, impossible for central species like haddock and cod. The criteria of at least equivalent selectivity could thus not be properly assessed for the DragLess gear.

STECF notes that a technical description of the SELTRA 300 escape panel, a selectivity device in one of the gear alternatives requested to be allowed to be covered by the de minimis exemption, is included in the JR. STECF considers that the information and level of detail is adequate for legislative purposes. Likewise, STECF considers that the JR reference to the definition of the T90 codend is adequate (Article 6, point 37 of Regulation (EU) N°2019/1241).

STECF notes that a technical description of the DragLess trawl, the other gear alternative under the *de minimis* exemption, is lacking in the JR and that information about this gear is limited overall in the submitted information.

STECF also notes that the JR compares the requested *de minimis* to other exemptions granted for situations where smaller fish are unavoidably caught in nets with larger mesh sizes. STECF considers that such a comparison is not correct given that the existing North Sea exemptions of that category (small pelagic species (11.1.l) and Pandalus (11.1.q) in large mesh trawls), both exhibit considerably lower proportions and volumes of unwanted catches than in the current case. STECF considers that the information available for this case suggests that the proportion of unwanted haddock in the fishery is a size selectivity issue, and not merely accidentally stuck negligible unwanted catches, that is typical for the two existing exemptions mentioned above.

STECF notes that the templates previously provided by STECF for the provision of fisheries information to support *de minimis* and high survivability exemptions were not used in the current submission.

STECF conclusions

STECF concludes that the ad hoc report addressed all the ToRs and was helpful for the assessment of the JR by PLEN 25-01.

Amendment of technical measures

STECF concludes that an introduction of the T90 codend as an amendment to the baseline gear specifications (Annex V, part B of Regulation (EU) N°2019/1241), will improve selectivity for roundfish (and small flatfish in some cases) provided that the mandatory use of the currently prescribed escape panels, in trawls and seines with mesh sizes smaller than the North Sea baseline mesh size (120 mm), still applies.

De minimis exemption for haddock below MCRS

STECF concludes that the information provided in the JR does not clearly demonstrate the difficulties for the fishery to further improve haddock selectivity, which is the conditionality referred to in the JR.

STECF concludes that the JR suggests to use the *de minimis* to incentivize the uptake of more benign fishing practises, in this case the participation in an electronic monitoring programme or the use of alternative more selective trawl designs. STECF (EWG 23-04 & 06) have previously identified similar de minimis exemptions in current legislation (e.g. Art 11.1(b-d) and 11.1(f) of Commission delegated regulation (EU) 2023/2359).

STECF concludes that the use of a 300 mm SELTRA panel in combination with >90 mm T90 is underpinned scientifically and will in general improve selectivity of roundfish and small flatfish.

STECF concludes that the provided technical description of the 300 mm SELTRA panel is adequate and could be used for legislative purposes.

STECF concludes that the selectivity criteria in the technical measures regulation, that a new gear shall have at least equivalent selectivity as the baseline gear, could not be assessed for the DragLess trawl design due to limited relevant selectivity information and the lack of a technical description in the supplemented material.

STECF concludes that, similar to previous submissions of JRs for this fishery, information about the relationship between the *de minimis* volume and the likely level of unwanted catches for the relevant fleet is lacking in the JR. STECF reiterates that the relationship between the permitted volume of unwanted catches discarded under the exemption and the estimated total amount of unwanted catches in the relevant fleets is needed for a meaningful assessment to be possible.

STECF reiterates the importance that regional groups use the STECF templates developed to ensure that all relevant information is provided with an exemption request (Annex II and III to EWG 24-04 and 24-06).

References

ICES. 2024. Haddock (*Melanogrammus aeglefinus*) in Subarea 4, Division 6.a, and Subdivision 20 (North Sea, West of Scotland, Skagerrak). In Report of the ICES Advisory Committee, 2024. ICES Advice 2024, had.27.46a20. https://doi.org/10.17895/ices.advice.25019252

Krag, L. A. and Melli, V. and O'Neill, F. G. and Hansen, K. and Karlsen, J. D., Dragless – a Holistic Approach to Gear Development: A Legal Anterior Large Mesh Panel Reduces Roundfish Bycatch and Drag in the Nephrops (*Nephrops Norvegicus*) Trawl Fishery. Available at SSRN: https://ssrn.com/abstract=5079012 or http://dx.doi.org/10.2139/ssrn.5079012

6.8 CFP monitoring – for early advice by 04/04

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 comments

To address the agreed Term of Reference, the STECF Adhoc Expert Working Group (STECF-EWG-Adhoc-25-01) was convened between January and March 2025 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 (STECF-EWG-Adhoc-25-01) accompanied by several detailed annexes to PLEN 25-01 providing:

1. Design-based indicators by ecoregions.
2. Numerical retrospective and historical performance analysis of model-based indicators.
3. Sensitivity analysis of model-based indicator F/F_{MSY} to the inclusion of surplus production models.
4. Model-based indicators input data and outputs.

The supporting electronic annexes include:

1. CFP monitoring protocols as agreed by STECF PLEN 23-03 (STECF, 2023).
2. URL links to electronic annexes referring to the reports and stock advice sheets underpinning the analysis.
3. R material for processing the data and produce indicators for the Northeast Atlantic.
4. R material for processing the data and produce indicators for the Mediterranean and Black Seas.
5. R material for computing the indicators.

The report and electronic annexes are available on https://stecf.ec.europa.eu/reports/cfp-monitoring_en.

STECF acknowledges that the report is clear and well laid out, comprehensively describing the analysis conducted by the experts and cataloguing the changes made in the approach since the previous report (STECF-EWG-Adhoc-24-01). STECF further notes that this is the second year that version 5.0 of the CFP protocol (Gras et al., 2023) as agreed by PLEN 23-03 (STECF, 2023), was applied.

STECF observes that the CFP monitoring protocol defines two types of indicators that are based on individual stock assessments:

- design-based indicators: those indicators display the raw number of stocks that fulfil some criteria (e.g. the yearly number of stocks below FMSY), without applying any statistical model
- model-based indicators are derived from a state-space model that averages the situation across stocks (e.g. the model-based indicator of F/FMSY averages the F/FMSY of the different stocks considered).

STECF notes that to better understand the results from the model-based indicators such as F/F_{MSY} time series, the STECF-EWG-Adhoc-25-01 report includes additional plots comparing the model-based indicators and the distribution of underlying data. STECF recalls that model-based indicators conceal a large diversity of situations among stocks, and as such STECF considers that the new plots to display model-based indicators and underlying data are valuable additions to the CFP monitoring report.

The STECF-EWG-Adhoc-25-01 report sets out the results of the analyses separately for the Northeast Atlantic (NE Atlantic) and the Mediterranean & Black Seas (Sections 3 and 4, respectively). Based on these results, progress towards achieving MSY objectives are summarised below. In the 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-EWG-Adhoc-25-01 report).

For the NE Atlantic (FAO area 27), the most recently published ICES stock assessments carried out up to (and including) 2024 incorporating data up to 2023 were downloaded from the ICES website on 22 January 2025. 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 2024 with data up to 2023, and from the GFCM quantitative stock assessment online STAR files comprising the most recently published assessments carried out up to 2024 with data up to 2022 in most of the cases and up to 2023 in some cases. As in previous reports, the Mediterranean and Black Sea dataset was thus trimmed a year before the NE Atlantic, i.e. 2022.

Methodological considerations

Performance perception revision

STECF notes that for the last two years, the analysis has shown a revision of previous CFP performance perception compared to what was presented in the reports until 2023, 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-EWG-Adhoc-25-01 report.

In recent years, STECF has highlighted increasing instability in model-based indicators. This results from various factors such as changes in the sampling frame, changes in stock assessment models used to compute indicators, or the inclusion of shared stocks which are less influenced by the CFP. Indeed, more stock assessments are available, covering stocks with contrasted exploitation histories, and with alternative stock assessment models being used, such as surplus production models. For example, in the current exercise, 15 stocks (over 66 in the stock panel) were assessed with a surplus production model in the Med & Black Sea, whereas there were only two in the 2020 exercise (STECF EWG-Ad-hoc 20-01). STECF considers that, while monitoring the number of stocks for which stock assessments and estimated reference points are available is a relevant indicator of the coverage of the scientific advice, the systematic inclusions of new stocks in model-based and design-based indicators as soon as they meet the protocol criteria, might increase the instability of those indicators from one year to the next, and impair a consistent monitoring of the CFP performance. All these aspects have contributed to a change in perception in recent years, which will require STECF to revisit and discuss the process used to monitor the implementation of the CFP for future evaluations.

Scaling issues of model-based indicators

- *scaling issues due to the change in protocol*

STECF notes that the CFP monitoring protocol was recently changed. 2025 is only the second year in which the revised protocol has been applied andhindsight on the new protocol is still limited. In this context, STECF-EWG-Adhoc-25-01 carried out a historical performance analysis to explore the changes in perception due to the new protocol. As last year, it shows that while temporal trends are similar, the new protocol estimates lower levels of F/F_{MSY} and higher B/B_{2003} compared to the protocol used until 2023. This is especially true in the Mediterranean and Black Seas, (Figures 32 and 33 in the STECF-EWG-Adhoc-25-01 report) with substantially lower values of F/F_{MSY} and higher values of B/B_{2003} with the new protocol.

- *scaling issues due to the change in the dataset*

STECF notes that as agreed in the protocol the stocks included in the analysis change every year based on the most recent data availability. STECF further notes that, as noted above, in recent years the number of stocks that are assessed using surplus production models has increased. The latest revision of the protocol already clarified that only quantitative assessments with tuning indices (survey indices or, if not available, CPUE time series) could be included in the analysis, excluding in particular catch-only assessment methods (Gras et al., 2023). However, this still leaves in a large diversity of methods, and STECF observes for

example that there are conceptual differences in F_{MSY} estimates from age-structured models and from surplus production models. STECF-EWG-Adhoc-25-01 report includes a sensitivity analysis to study the integration of stocks assessed with surplus production models. 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. 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. STECF further notes that that the sensitivity analysis suggests that the inclusion of surplus production models also brings potential scaling issue, though seemingly of more limited magnitude than scaling resulting from the change of protocol.

- *implication of those scaling issues*

In summary, STECF underlines that the same changes in perception were highlighted last year and that they may result both from the change of protocol and from the change in the dataset.
STECF considers that this indicates that while temporal trends are robust, the absolute values are not. Care should thus be taken when comparing the values of F/F_{MSY} and B/B_{2003} to specific thresholds (e.g. comparison to 1).
In this context, STECF considers that there is a need for further and recurrent discussions on methodological aspects of the protocol.

Finally, STECF reminds that model-based indicators are average of fishing mortality and biomass trends across stocks of very different sizes and landings volume. As a consequence, a small stock with low catches or biomass has the same weight as a large stock with large catches. STECF also reminds that the CFP does not aim to achieve its MSY objectives on average, values that are monitored by model-based indicators, but to achieve these objectives for all stocks. Therefore, STECF considers that this might be best monitored by design-based indicators.

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 2023 and 2003 to 2022, 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 with respect to reference points

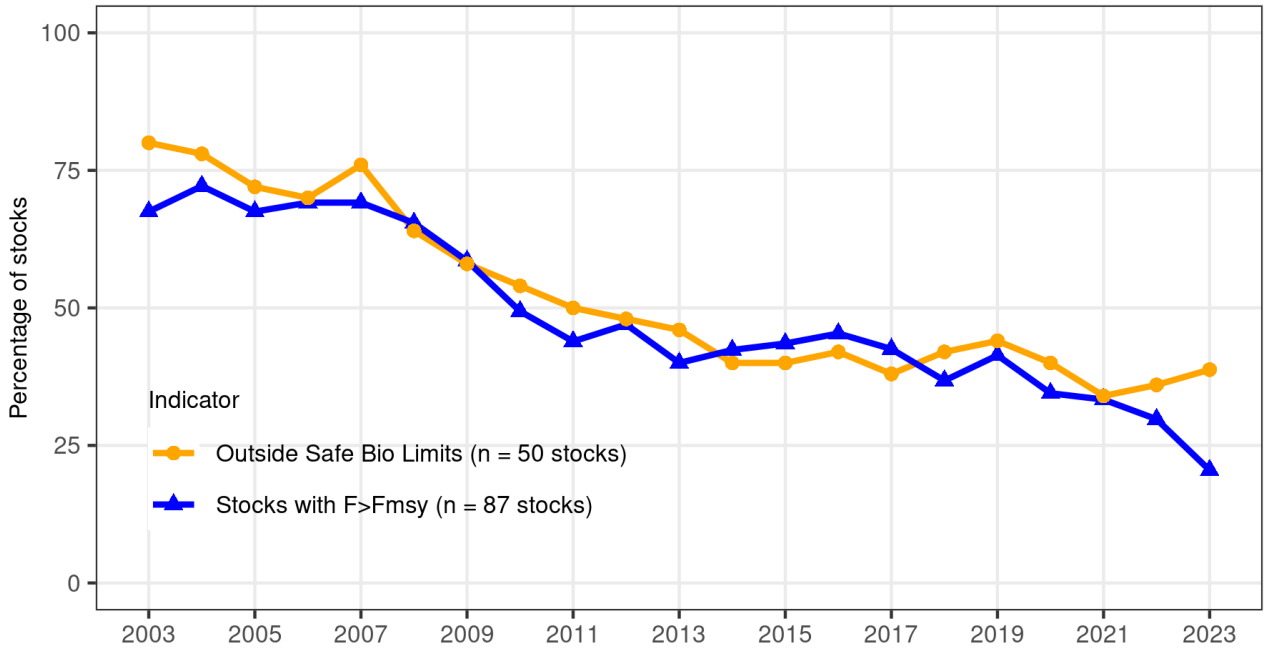
- *Northeast Atlantic*

The indicators provided in STECF-EWG-Adhoc-25-01 report show that in the NE Atlantic (both EU and non-EU waters), the stock status has significantly improved since 2003 (Figure 6.8.1) but that some stocks are still exploited above F_{MSY}.
Among the stocks included in the analysis (Table 2, in STECF-EWG-Adhoc-25-01 report), the proportion of stocks with $F>F_{MSY}$ (blue line) has decreased from around 67% (2003) to 20% in 2023. The proportion of stocks outside safe biological limits ($F>F_{PA}$ or $B<B_{PA}$, yellow

line, Table 5 in the STECF-EWG-Adhoc-25-01 report), computed for the 50 stocks for which both reference points were available, follows a similar decreasing trend, from 80% in 2003 to 39% in 2023.

STECF observes a divergence in the trends of stocks outside Safe Biological Limits and stocks with F>F_{MSY} (Figure 6.8.1) in the last two years. This is related to three stocks (sol.27.20-24, sol.27.8ab, whg.27.6a) for which biomasses have fallen below Bpa since 2021 although their F remain below F_{MSY}, and one stock for which fishing mortality has overshot Fpa in 2023 (mac.27.nea).
While this inconsistency of trends is thus caused by a limited number of stocks (two in 2022 and two more in 2023), STECF considers that this divergence may convey important signals and should be monitored in the future.

Figure 6.8.1. Trends in stock status in the NE Atlantic 2003-2023. Two calculated proportions (as percentage) are presented: blue line: the proportion of stocks with F>F_{MSY} (out of a total of 87 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 50 stocks).



Source: Own elaborations based on ICES data.

Combining these two calculated proportions (Table 6.8.1), STECF notes that in 2023, 10 stocks that were exploited below F_{MSY} were still outside safe biological limits, and four stocks inside safe biological limits were still exploited above F_{MSY}. In addition, 36 stocks had an unknown status with regards to safe biological limits. For the last known year, of the 87

stocks considered, only 30% (26 stocks) were neither exploited below F_{MSY} nor outside safe biological limits, suggesting that the objective in Art. 2.2 of the CFP[8] has not been met.

Table 6.8.1. Number of stocks with $F>F_{MSY,}$ or FF_{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 2023 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}**
Inside SBL	26	4
Outside SBL	10	10
Unknown SBL	33	4

Source: Own elaborations based on ICES data.

STECF observes that the overall improvement in the status of the stocks at the NEA level might hide contrasted situations among and within ecoregions. For example, the trends in the number of stocks within safe biological limits (Figure 6 of STECF-EWG-Adhoc 25-01 report) seem to be stable in recent years in the Celtic Sea, but the number of stocks for which both $F<F_{MSY}$ and $B>B_{MSY}$ (Figure 8 of STECF-EWG-Adhoc 25-01 report) seem to be decreasing.

- *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. For 30 stocks, both F_{MSY} and B_{MSY} are available for 2022, of which 9 were calculated during the STECF Western Mediterranean stock assessment working group (EWG 24-12 and EWG 24-02), and 21 were estimated by GFCM.

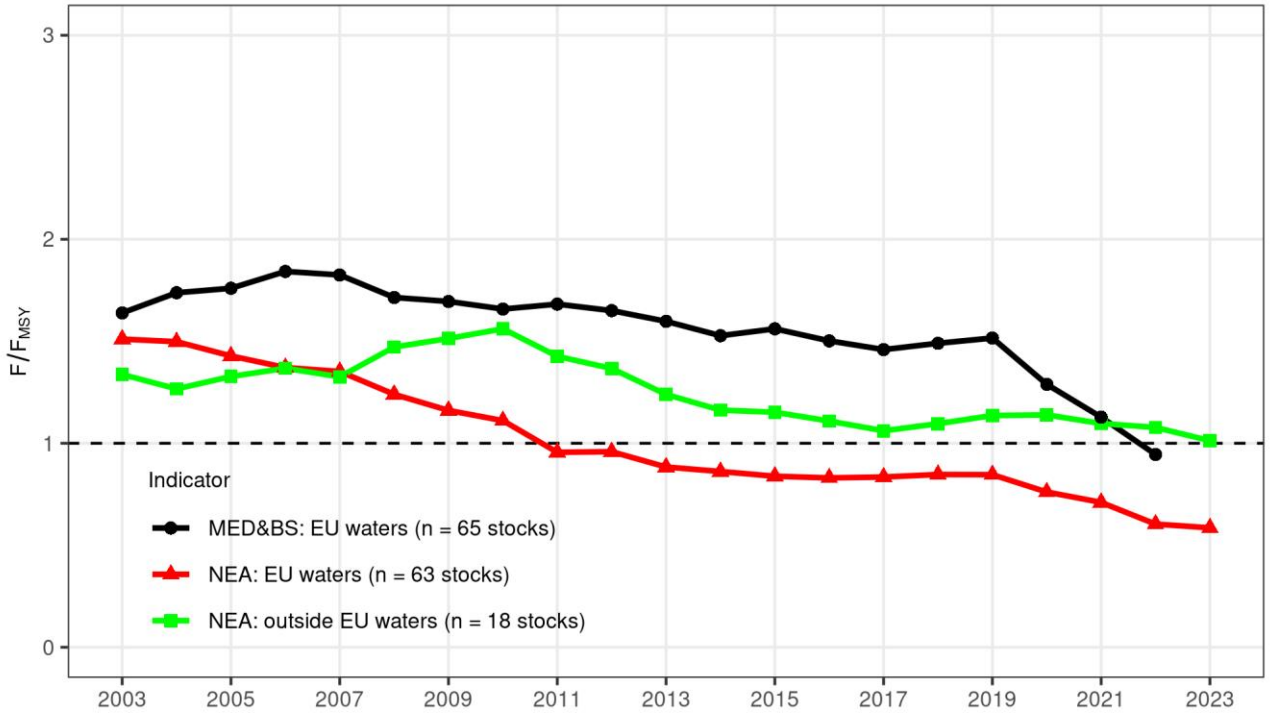
STECF notes that Safe Biological Limit reference points are not available in the Mediterranean assessments, so the analysis was restricted to comparisons to MSY. Among the stocks for which F_{MSY} was available (Table 26, in STECF-EWG-Adhoc-25-01 report), the proportion of exploited above F_{MSY} has decreased from around 75% in 2004 to more than 50% in 2022.
STECF notes that, as agreed in the recent methodological EWG for defining reference points (EWG 24-02), $F_{0.1}$ was used as a proxy for F_{MSY} for most of these stocks and consequently, the biomass at $F_{0.1}$ is used here as a proxy for B_{MSY}. STECF-EWG-Adhoc-25-01 report presents indicators on the number of stocks exploited above F_{MSY} and on the number of stocks with F above F_{MSY} or SSB below B_{MSY} (STECF-EWG-Adhoc-25-01 report).

8 "*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*".

Overall trends in the fishing pressure: Ratio of F/F_{MSY}

As agreed by STECF PLEN 23-03 (STECF, 2023), STECF-EWG-Adhoc 25-01 computed the trends in fishing pressure using a state-space model as implemented in the R package JARA (Winker et al., 2019), tailored to the needs of CFP monitoring.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 and 28 of the STECF-EWG-Adhoc-25-01 report. Trends in the median values for F/FMSY are summarised in Figure 6.8.2 over the time-series for the NE Atlantic inside and outside EU waters and for the Mediterranean and Black Sea.

Figure 6.8.2. Trends in fishing pressure 2003-2023. Three model-based indicators F/F_{MSY} are presented: red line which represents 63 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 65 stocks from the Mediterranean Sea & Black Seas.

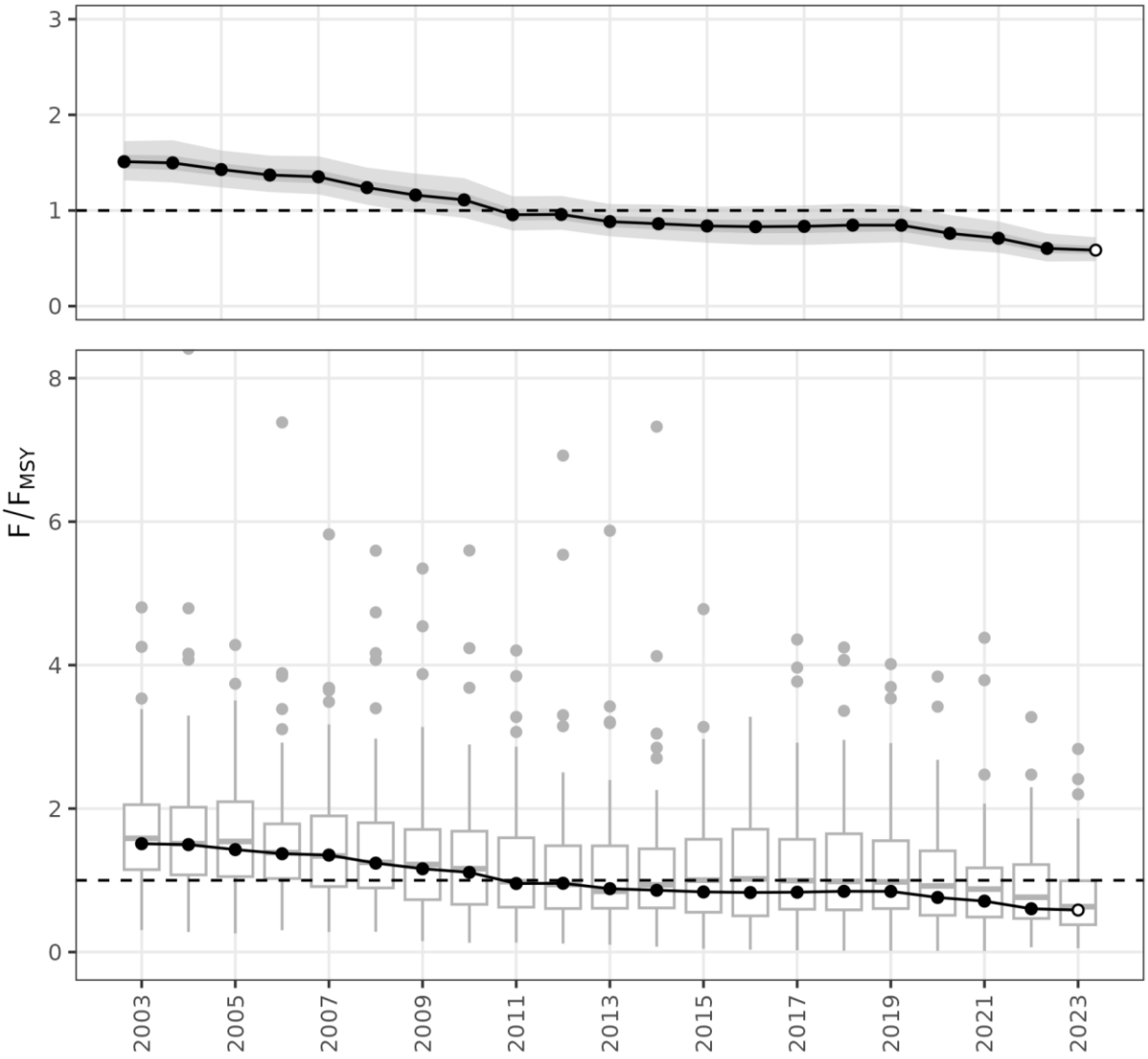


Source: Own elaborations based on ICES, GFCM and STECF data.

- *Northeast Atlantic*

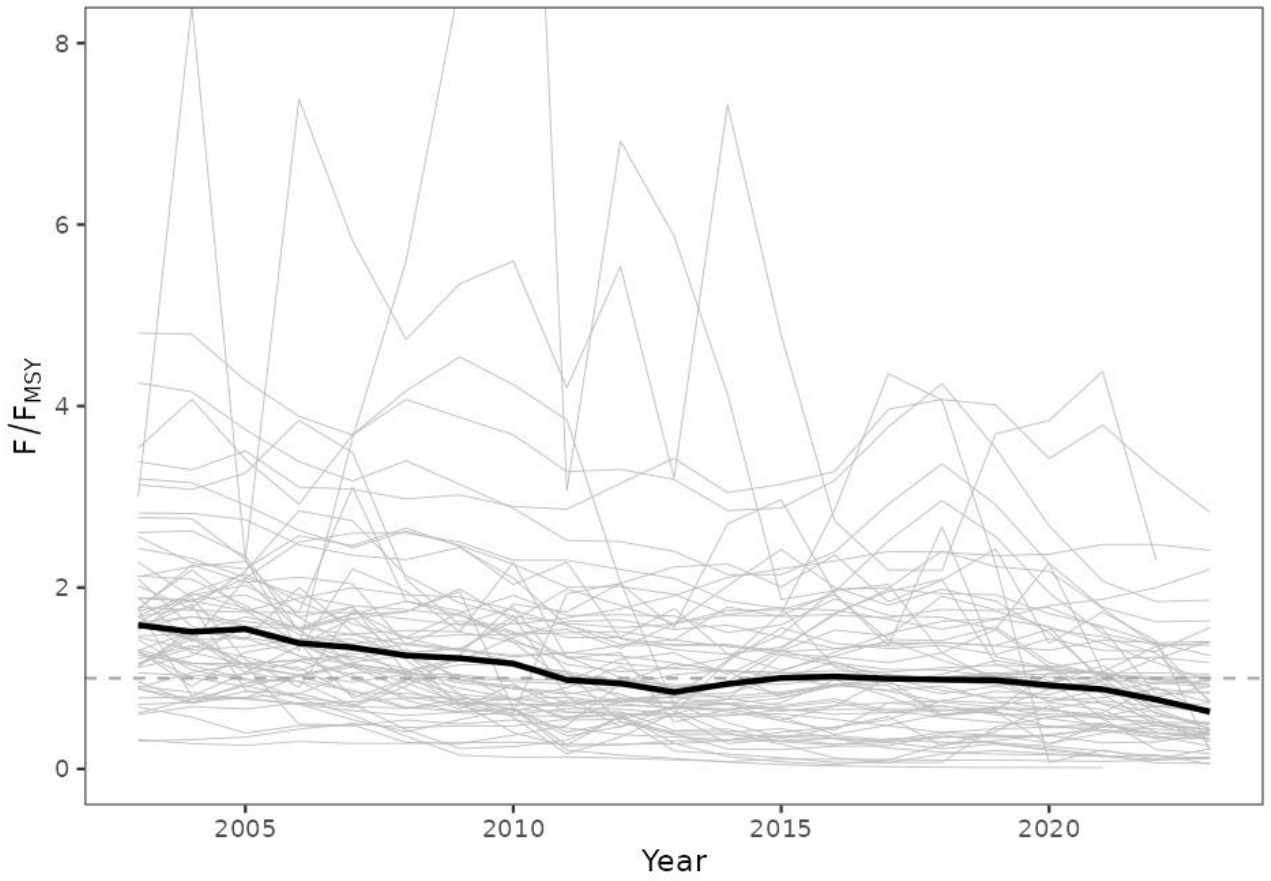
In the NE Atlantic EU waters, the model-based indicator of fishing pressure (F/F_{MSY}, based on 63 stocks with appropriate information – Figure 9 in the STECF-EWG-Adhoc-25-01 report) shows a gradual downward trend over the period 2003-2023 (Figures 6.8.2 and 6.8.3). This is consistent with the observed trends in the raw data (Figure 6.8.3). STECF notes that while the average value is below 1 in the last year, some stocks still have a very high F/FMSY value (Figure 6.8.4).

Figure 6.8.3. Trend in model-based F/FMSY in the NE Atlantic EU waters (based on 63 stocks - top panel). The dark line and points stand for the model-based indicator and the grey ribbon for the associated 95% confidence interval. The bottom panel displays the model-based trend in F/FMSY (solid black lines and dots) while the boxplots show the distribution of the observed data. The range of the y-axis on the bottom panel was restricted to [0-8] to better see the trends, however one stock in 2010 has a F/FMSY greater than 15.



Source: Own elaborations based on ICES data.

Figure 6.8.4. Observed trends in F/FMSY for each stock in the NE Atlantic EU waters (63 stocks). Each grey line corresponds to a single stock. The black line corresponds to the yearly median of those data. The range of the y-axis was restricted to [0-8] to better see the trends, however one stock in 2010 has a F/FMSY greater than 15. The dashed grey line indicates the F/FMSY=1 ratio.



Source: Own elaborations based on ICES data.

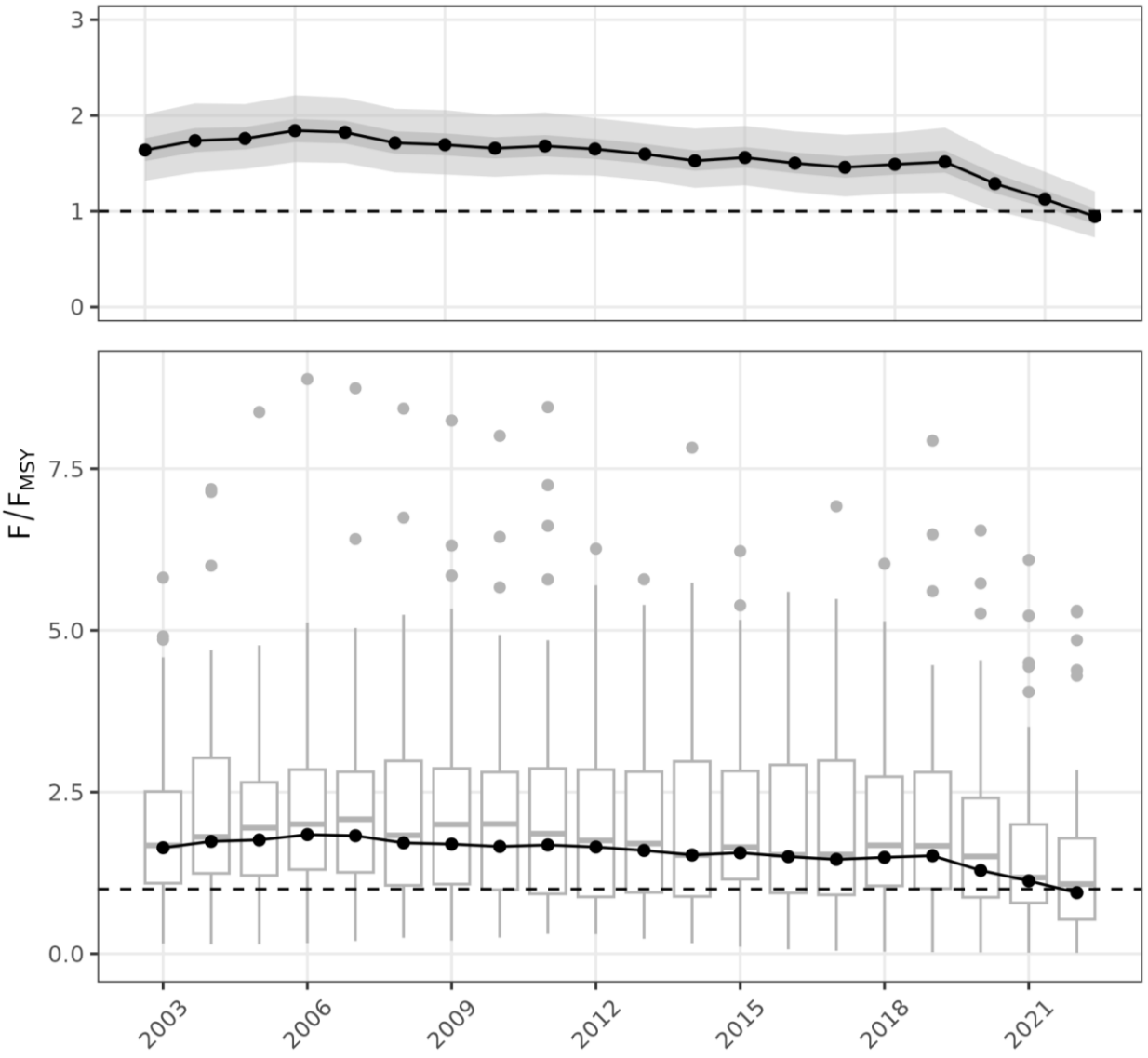
The same model-based indicator was computed by the STECF-EWG-Adhoc-25-01 expert group for an additional set of 18 stocks located in the NE Atlantic outside EU waters (Figure 11 in the STECF-EWG-Adhoc-25-01 report). A first decreasing phase happened from 2003 to 2013. That was followed by a phase of less steep decrease until 2019. The decrease became again more pronounced over the years 2019-2022 and the ratio has now been stable over the last two years (Figure 6.8.2).

- *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 three years (Figure 6.8.2 and 6.8.5). However, it is not clear which driving factors are leading or affecting the estimated pattern. STECF is not in a position to assess whether this change will confirm into a longer-

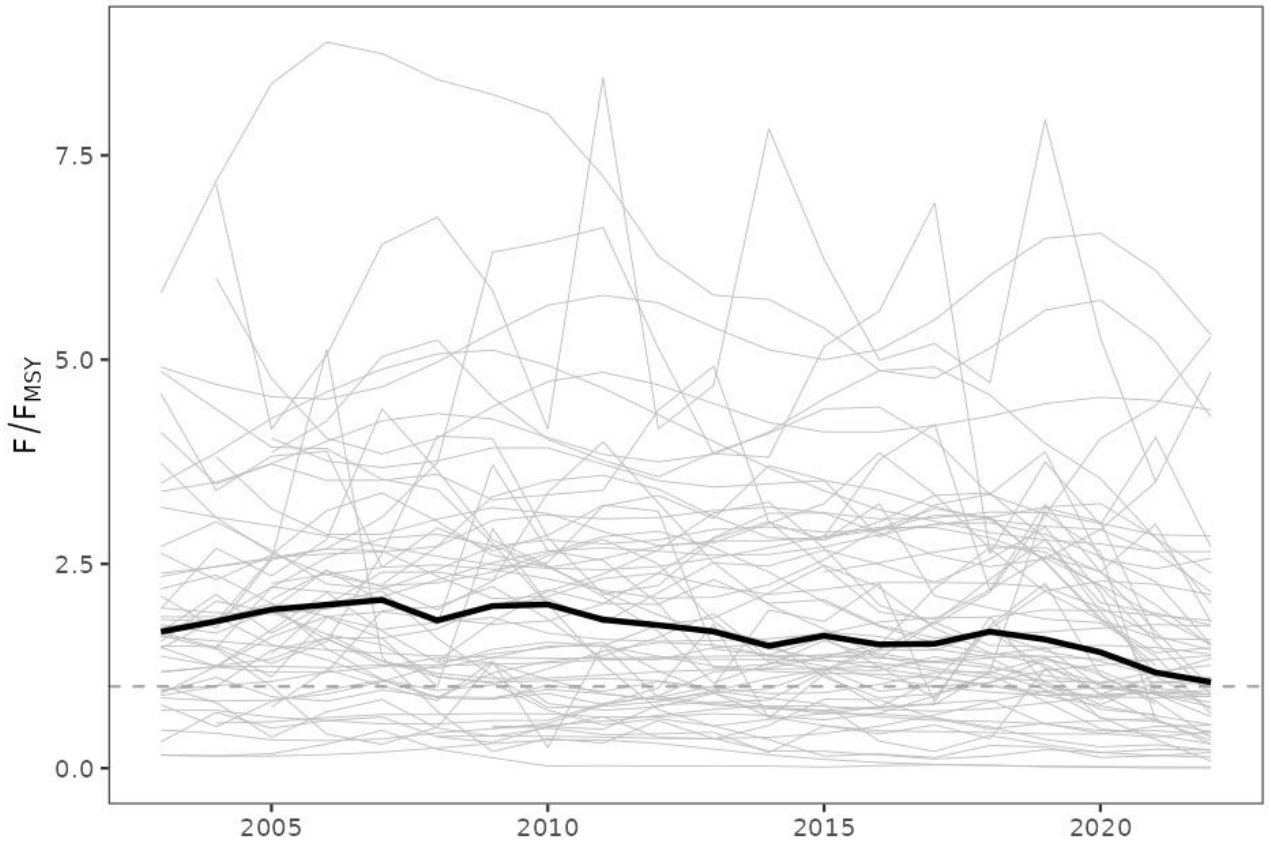
term positive trend in the near future. However, STECF notes that the trend is also visible in the raw data (Figure 6.8.5). Moreover, STECF notes that some stocks still have extremely high F/FMSY values (Figure 6.8.6).

Figure 6.8.5. Trend in model-based F/FMSY in the Mediterranean and Black Seas (based on 65 stocks- top panel). The dark line and points stand for the model-based indicator and the grey ribbon for the associated 95% confidence interval. The bottom panel displays the model-based trend in F/FMSY (solid black lines and dots) while the boxplots show the distribution of the observed data.



Source: Own elaborations based on GFCM and STECF data.

Figure 6.8.6. Observed trends in F/FMSY for each stock within MED&BS. Each grey line corresponds to the result of one specific stock assessment. The black line corresponds to the yearly median of those data. The dashed grey line indicates the F/FMSY=1 ratio.



Source: Own elaborations based on GFCM and STECF data.

STECF notes that the number of stocks considered in computing the indicator has been varying over time, as some stocks have been added and others have been revised in terms of stock boundaries (e.g. covering more GSAs).
As highlighted during the last STECF CFP monitoring analysis (STECF PLEN 24-01), many of these recently integrated stocks are small pelagic stocks, which due to changes in local market conditions following reduced growth of the fish in some GSAs (e.g., GSA7, Gulf of Lions), have experienced reduced fishing pressure in the last ten years. STECF considers that this might have, at least partially, contributed to the sharp reduction of the observed F/F_{MSY} in recent years. However, as illustrated in Figure 6.8.7, this is not reflected by the trend in the Biomass indicator which is not showing any increase. STECF notes that fishing effort measures were implemented in several GFCM recommendations and the WestMed Multiannual Management Plan in the late 2010s / early 2020s. However, STECF considers that the observed trends in fishing effort (STECF EWG 24-12 for the WestMed) cannot solely explain the rapid drop of F/F_{MSY} in the last few years. STECF has carried out some

exploratory analysis to investigate which stocks were driving the observed decline in F/F_{MSY} trend but considers that further work is needed to draw any firm conclusions.

As reported in TOR 6.5 of the PLEN 24-01 report, the inconsistency of the decreasing trend in F/FMSY and the flat trend in the 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, a decreasing trend in F/FMSY seems to be taking place in the Mediterranean and Black Seas. However, given the previously mentioned scaling issues, STECF suspects that the order of magnitude as predicted by the model may be overly optimistic. Moreover, STECF highlights that many stocks still display extremely high F/FMSY values (Figure 6.8.3).

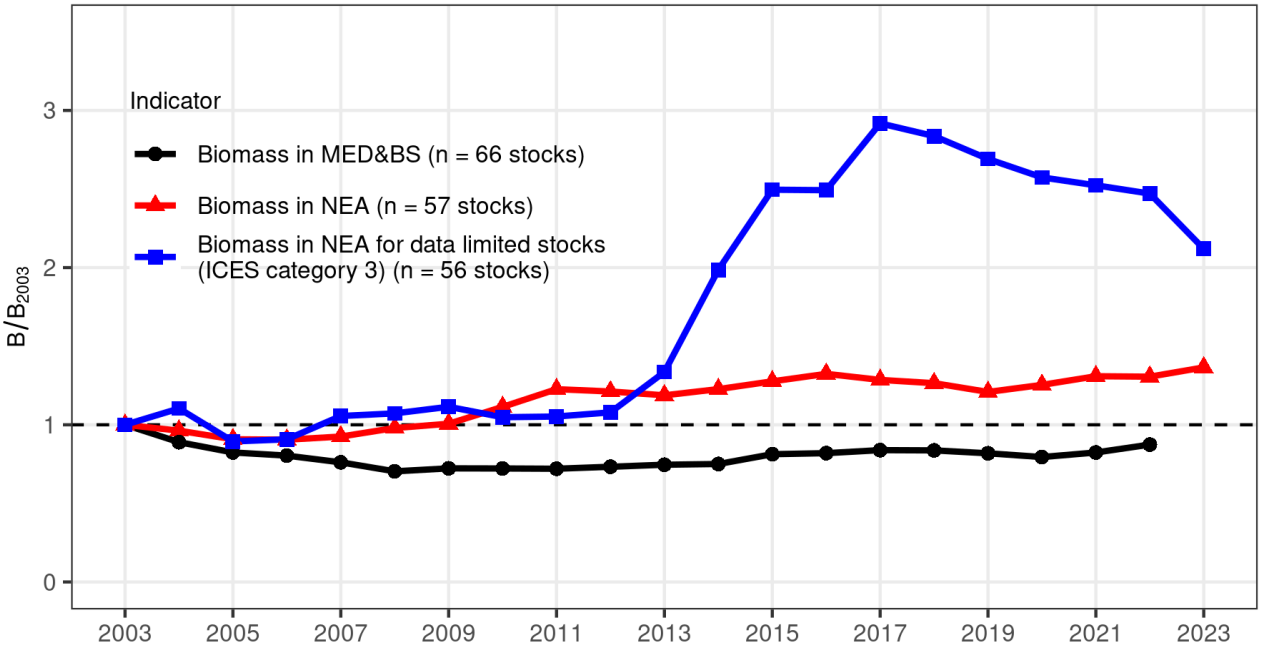
Trends in Biomass

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-EWG-Adhoc 25-01 report. Trends in the median values for biomass over time are summarised in Figure 7 below. STECF notes there is a large uncertainty around this indicator, especially when disaggregated by ecoregions (e.g. see Figure 25 in the STECF-EWG-Adhoc-25-01 report).

The model-based indicator for the trend in biomass shows a general increase over time since 2007 in the NE Atlantic (EU waters only - Figures 13 of the STECF-EWG-Adhoc-25-01 report) for assessed stocks (ICES categories 1 and 2 stocks). However, STECF notes that this general increasing trend hides a diversity of situations among ecoregions, with an increase in the BoBiscay & Iberia ecoregion and for widely distributed species, but more stable trends in other ecoregions, with even possibly a slight decrease since 2016 in the Celtic Seas. Furthermore, for data limited stocks from NE Atlantic (ICES category 3 stocks – Figure 15 of the STECF-EWG-Adhoc-25-01 report), STECF observes that after a stable period until 2012 and an increase till 2017, the recent trend suggests a decrease in biomass. STECF, further notes a high level of uncertainty around the trends.

In the Mediterranean & Black Seas, the biomass was slightly higher at the beginning of the time series, but declined until 2008, after which it remained stable or increased slightly (Figure 6.8.7). As for the NE Atlantic, this overall trend hides a diversity of patterns per ecoregions. Despite the overall reduction of F/FMSY, the biomass does not seem to increase in most ecoregions, except in the Western Med where an increase is observed (Figure 25 of the STECF-EWG-Adhoc-25-01 report).

Figure 6.8.7. Trends in the model-based indicators of stock biomass scaled to 2003. Three indicators are presented: red line for the NE Atlantic EU waters (57 stocks); black line for the Mediterranean & Black Seas (66 stocks); and blue line for data-limited stocks in NE Atlantic (ICES category 3, 56 stocks).

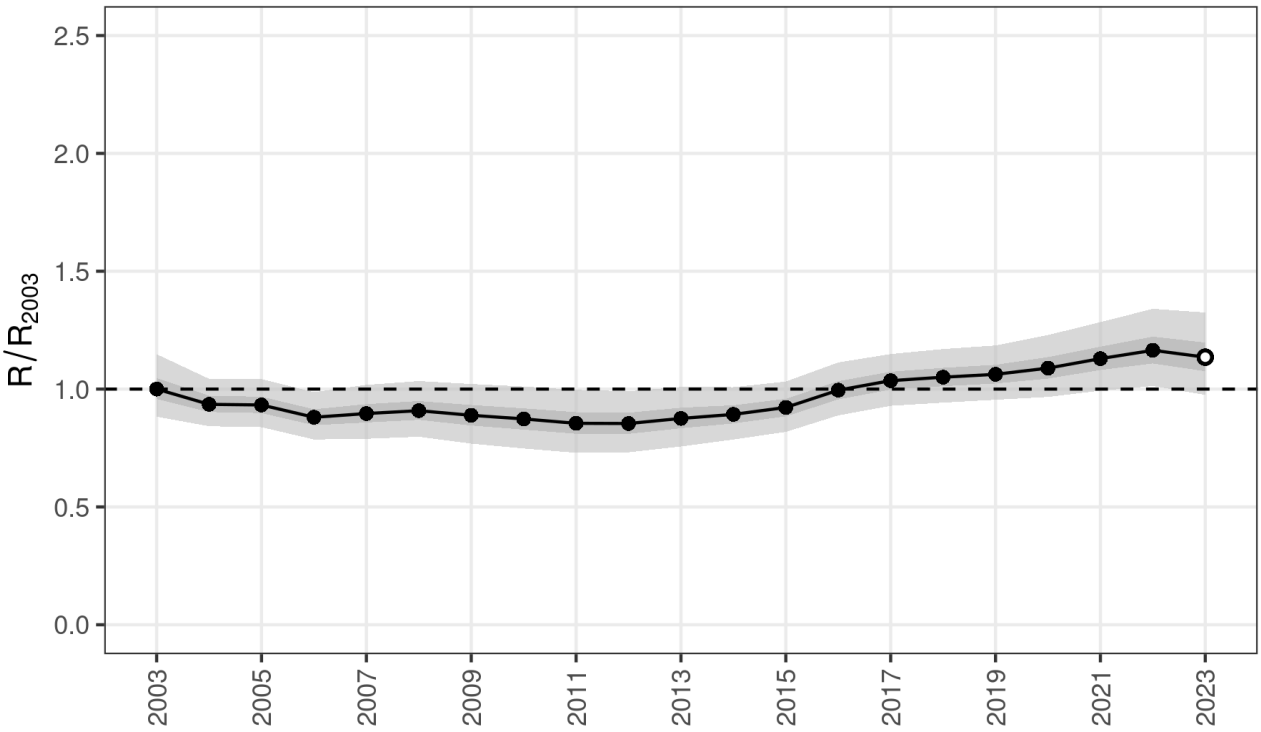


Source: Own elaborations based on ICES, GFCM and STECF data.

Trends in Recruitment

The model – based results for the trend in decadal recruitment is given in Figure 16 in the STECF-EWG-Adhoc-25-01 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). The model output values are displayed in Figure 8. The average decadal recruitment indicator shows a decreasing trend until 2011 and an inversion afterwards, the maximum being reached in 2022. STECF observes that this indicator aims to detect long-term changes in recruitment and as such, smooths short term variations that could have occurred over the last years. In this context, STECF reminds that recent lower recruitments reported in various stocks (e.g. sol.27.78ab, her.27.20-24, her.27.3a47d) cannot be depicted with this decadal recruitment indicator. STECF suggests that the development of an additional indicator aiming to detect short-term changes of recruitment might be relevant to detect early signs of changes in ecosystem.

Figure 6.8.8. Trend in model-based decadal recruitment indicator scaled to 2003 in the NE Atlantic area (based on 58 stocks).



Source: Own elaborations based on ICES data.

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 include 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 247 biological stocks included in EU waters (at least partially). Of these, 120 stocks (49%) are data limited (ICES category 3 and above, Table 6.8.2).

Table 6.8.2. 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 (Gras et al. 2023) 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	3	2	2	0	0	0	7
Azores	0	0	2	0	1	0	3
Baltic Sea	7	3	7	0	0	0	17
Bay of Biscay & Iberia	14	9	14	0	6	3	46
Celtic Seas	27	3	15	1	12	9	67
Greater North Sea	26	4	12	2	6	3	53
Iceland, Greenland and Faroes	19	1	4	0	1	1	26
Widely	8	1	7	0	4	8	28
Total	104	23	63	3	30	24	247

Source: Own elaborations based on ICES data.

The present CFP monitoring analysis for the NE Atlantic is focused on stocks with a TAC and for which estimates of fishing mortality, biomass and biological reference points are available. As detailed in the STECF-EWG-Adhoc-25-01 report, not all indicators can be calculated for all stocks in all years. The adhoc group was able to compute indicators for 87 category 1 and 2 stocks respectively depending on indicators, years, and areas, and 56 category 3 stocks (Table 2 in the STECF-EWG-Adhoc-25-01 report). All together, these stocks represent a large share of catches. However, STECF notes that 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 basin, STECF notes that, despite the recent 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 162 TACs (combination of species and fishing management zones) in the EU waters of the NE Atlantic are derived using the agreed sampling frame (Gras et al. 2023) with six additional TACs added since 2023 (STECF-EWG-Adhoc-25-01). 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 adhoc group computed an indicator of advice coverage, where a TAC is covered by a stock assessment when at least one of its divisions matches the spatial distribution of a stock for which reference points have been estimated from an ICES full assessment. Based on this indicator, 54% of the 162 TACs are covered, at least partially, by stock assessments that provide estimates of F_{MSY} (or

a proxy), 46% by stock assessments that have B_{PA}, with 23% covered by stock assessments that provide estimates or proxies of MSY $B_{trigger}$ (Table 17 of STECF-EWG-Adhoc-2025). 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 coclusions

STECF concludes that the analyses carried out in the STECF-EWG-Adhoc-25-01 report comply with the agreed protocol and provide a comprehensive and informative overview of the performance towards achieving the MSY objectives of the CFP.

Regarding the progress made in the achievement of FMSY 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 2003-2023. However, this overall picture hides a diversity of situations in different ecoregions, and an even greater diversity at the stock scale, some of which are still subject to very high levels of fishing pressure. In the Mediterranean and Black Seas, STECF concludes there are indications that fishing mortality has decreased since 2019, although no substantial increase in biomass has been observed.

STECF concludes that several stocks remain in a state of overfishing and/or outside safe biological limits in both North-East Atlantic and Med & Black-Sea. Thus, it can be concluded that the CFP objective that aims to ensure that all stocks are above biomass levels capable of producing maximum sustainable yield, has still not been achieved.

While acknowledging the recent increase in the number of stocks included in the analysis, STECF concludes that for many stocks, key reference points (B_{PA}, F_{PA}, F_{MSY} or B_{MSY}) are yet to be defined. STECF therefore supports the ongoing work in ICES, GFCM and STECF EWGs to further increase the number of stocks with such key reference points.

STECF concludes that continued and recurrent discussions of the method and outcomes of the CFP monitoring exercise could contribute to a further improvement of the protocol. As previously concluded by STECF, such discussions should address inter alia, the inclusion of surplus production models, the choice of mean estimator, the inter-annual variability arising from the changing number of stocks included in the analysis, additional recruitment indicators and selectivity indicators, the better accounting of the increasing diversity of stocks available for the monitoring exercise (in terms of life history traits, size, associated landings, stock assessment methods).

STECF concludes that the outcome of the discussions would inform potential amendments to the current protocol with respect to certain technical/statistical aspects of the analysis ahead

of the next 2026 CFP monitoring exercise. STECF therefore suggests that such discussions are held during the July plenary (PLEN 25-02) with the aim of: (1) proposing amendments of the protocol to be included for the 2026 exercise, and to (2) develop a roadmap prioritising tasks and needs for those amendments and for a future version of the protocol.

References

Gras, M., Vasilakopoulos, P., Pierucci, A., Kupschus, S., Mantopoulou Palouka, D., Winker, H. and Konrad, C., Protocol for the Monitoring of the Common Fisheries Policy, Publications Office of the European Union, Luxembourg, 2023, JRC136235.

GFCM 2022. Report of the Working Group on Stock Assessment of Small Pelagic Species (WGSASP). Scientific Advisory Committee on Fisheries (SAC). url: https://www.fao.org/gfcm/technical-meetings/detail/en/c/1634928/.

Saraux, C., Van Beveren, E., Brosset, P., Queiros, Q., Bourdeix, J.-H., Dutto, G., Gasset, E., et al. 2019. Small pelagic fish dynamics: A review of mechanisms in the Gulf of Lions. Deep Sea Research Part II: Topical Studies in Oceanography, 159: 52–61.

STECF, 2023a. 73rd plenary report (STECF-PLEN-23-02), Rihan, D. and Doerner, H. editor(s), Publications Office of the European Union, Luxembourg, 2023, doi:10.2760/89951, JRC136363.

STECF, 2023b. 74thPLENARY REPORT (STECF-PLEN-23-03), Rihan, D. and Doerner, H. editor(s), Publications Office of the European Union, Luxembourg, 2023, JRC136255.

Winker, H., Pacoureau, N., Sherley, R.B. JARA: ‘Just Another Red-List Assessment’. BioRxiv, 2019, p. 672899.

6.9 Technical and scientific advice on the innovative fishing device Trap-line

Background provided by the Commission:

According to ICES, an innovative fishing gear is a gear or a significant component of a gear that is different from the baseline in the current EU regulations or, in the absence of such legislation, different from the gear commonly used in a specific sea basin (area) in EU waters.

Recent reports from ICCAT highlight the emergence of a new fishing gear: "**trap-lines"** (Spanish: Lazo; Italian: Esca multifilo per pesce spada or Trappole per pesce spada). Initially introduced in Spanish and Italian fleets, this gear has quickly spread to other fleets.

According to Garibaldi et al., this gear has reportedly been in use since at least 2021, presenting several challenges for researchers. One key issue is defining CPUE, particularly because the gear itself is not officially defined, and therefore lacks a formal framework that would enable CPCs to collect and report data. Additionally, the impact of this gear needs to be assessed in terms of target species, bycatch species, socio-economic relevance, and environmental impact to allow managers to implement sound, evidence-based measures.

In its 2023 report, the ICCAT SCRS requested Contracting Parties to implement measures that ensure this new gear is recorded in logbooks and fishery databases. It also urged further research to determine the extent of its use, including when it was introduced into fisheries, historical catch data, its geographic distribution (Atlantic, Mediterranean, or both), the fleets utilizing it, the number of vessels involved, whether it is used alone or in combination with longline gear, and, if so, in what proportion.

Furthermore, the SCRS requested CPCs to conduct CPUE analyses specific to this gear for both target and non-target species.

Lastly, in its advice on technical measures to be tested in the Mediterranean Sea (Ref. 251/2024, dated 23rd October 2024), MEDAC requested the Commission to refer the assessment of this new fishing gear to the STECF, particularly regarding its environmental and socioeconomic impacts. According to several sector operators in various Italian and Spanish maritime districts, many characteristics of this gear appear to optimize swordfish fisheries—not only in terms of catch capacity but also in its socio-economic and environmental dimensions. Additionally, MEDAC has provided data collected by UNIMAR, which will be submitted to the STECF.

Background documents are published on: https://stecf.ec.europa.eu/meetings-calendar/past-meetings

Request to the STECF

STECF is requested to provide technical advice on this new device, whether it qualifies as a fishing gear or a selective device, along with its characteristics.

Advice is also sought on the likely impact of this device on selectivity and its potential effects on fisheries, particularly swordfish fisheries and other highly migratory species. Additionally, any evidence STECF may find regarding the use of this gear to target other species should be considered.

STECF should consider potential economic, social and environmental impacts of the gear, the latter notably on by-catches.

Furthermore, advice is requested on a roadmap of additional assessment to be carried out for its inclusion in the EU legal framework. (Including, but not limited to, potential need for a pilot project—if not already in place—to further assess the device.).

Background documents provided to STECF

STECF was provided with two background documents:

- The Garibaldi et al. (2024) SCRS ICCAT paper describing trap-lines with some preliminary observations on their selectivity.
- A technical document by UNIMAR (provided to the Commission by MEDAC) describing trap-lines with some preliminary observations on their selectivity.

STECF observations

Description of the gear

STECF notes that the definition of fishing gear is provided in Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL): "*A fishing gear is any physical device or part thereof, or combination of items that may be placed on or in the water or on the seabed with the intended purpose of capturing or controlling for subsequent capture or harvesting marine or freshwater organisms.*"

STECF observes that the trap-line is currently not described in the FAO manuals classifying fishing gears (He et al., 2021 and Lucchetti et al., 2023), as it is a recently introduced fishing device. In fact, as far as STECF is aware its description is currently only reported by Garibaldi et al. (2024) and in the technical document by UNIMAR (2024).

STECF highlights the importance of classifying this new device either as a new gear or as a gear component.

STECF notes that gear components are added to existing gears to improve capture efficiency, mitigate impacts and to facilitate transfer of fish from fishing gears (He et al., 2021).

STECF notes that as described in Garibaldi et al. (2024) the new device commonly called trap-line, is a drifting longline (LLD) which, attached to each branch line, instead of a baited hook, has a series of monofilament nylon concentric rings (a spiral) (ranging from 6 to 8) of increasing size (from 30 cm to 50/70cm diameter) joined by a tape where a U shaped wire is

connected to a swivel. Within the central ring the bait is positioned nowadays with an artificial lure occasionally filled with a sardine.

STECF notes that in He et al. (2021) longlines are defined as a type of “hook-and-line” as until now longlines were solely armed with hooks. In this aspect, a trap-line is fully different from a traditional longline as target species are not hooked but entangled by the monofilament rings. The presence or absence of the hook makes no difference in the catchability (Garibaldi et al., 2024). As described by Lucchetti et al. (2023) “Entanglement occurs when the fish becomes trapped in the net by its spines, fins or other body protrusions.”.

STECF observes that due to the characteristics of the trap-line and the way it catches target species (which is independent from the presence of a hook within the trap), this device could be classified as a new gear instead of a gear component. Therefore, drifting longlines armed with hooks (LLD), with traps and hooks, or armed only with traps could be classified by different gear codes.

STECF observes that the RCG ISSG métier and transversal variable issue subgroup (https://www.fisheries-rcg.eu/intersessional-subgroups/) is responsible for the maintenance of naming conventions for gears, metiers, selectivity devices, etc. The main goal of the group is to provide a well maintained list that data calls rely on to ensure there are standard codes used across all data calls. Potential new codes developed to classify LLDs armed with traps should be submitted through this RCG ISSG subgroup.

Impact on selectivity

STECF notes that no data were provided to STECF to assess the impact of trap-lines on selectivity in the swordfish fishery.

STECF observes that Garibaldi et al. (2024) suggest that catches of small (<120 cm) swordfish (*Xiphias gladius*) and of by-catch species is lower in traps compared to hooks. Also the UNIMAR technical document suggests a lower probability of catching undersized individuals (<100 cm (ICCAT, Rec. 16-05)) and of by-catch species (sea birds, marine mammals, elasmobranchs, bony-fishes other than swordfish etc.). That said, Garibaldi et al. (2024) declare that their reporting is not based on a representative sample and the UNIMAR technical document does not mention the sample size that they are basing their observations on.

STECF observes that the available background documents suggest that the shape of the selectivity curve on swordfish could change compared to the hook-LLD. Therefore it should be estimated if traps are more selective towards bigger individuals or not.

STECF observes that future monitoring of trap-lines should consider separately superficial and mesopelagic trap-lines, as in general surface and mesopelagic LLD already show a different composition of by-catch species (Garibaldi, 2015).

STECF notes that even if swordfish stocks are managed through a TAC system, the potential higher catchability of traps compared to hooks, as suggested by Garibaldi et al. (2024), should be evaluated specifically to account for potential detrimental effects on other commercial species harvested through trap-lines which are not managed by TACs.

Environmental and socio-economic impacts

STECF notes that no data were provided to STECF to assess the environmental and socio-economic impact of trap-lines.

STECF observes that the technical document by UNIMAR (2024) suggests that the use of traplines would be economically beneficial to fishers as no natural baits would be used and aritifical lures can be used multiple times if are not lost. Furthermore, STECF observes that Garibaldi et al. (2024) states that trap-LLD show a higher catchability (higher CPUEs) than hook-LLD which potentially could lead to economic benefits for fishers.

Roadmap of additional assessment for inclusion in EU legal framework

STECF does not have information on whether pilot projects are already ongoing at national level in all interested countries.

STECF observes that on-board data collection monitoring programs would be fundamental to be able to properly evaluate the selectivity and the catch efficiency of traps compared to hooks.

STECF highlights that the Commission should investigate with Member States if on board observers and Electronic Monitoring (EM) have already started to collect information on the new device trap-line and if these data could be made available to start estimating potential effects on selectivity.

STECF notes that the monitoring of trap-lines use in the swordfish fishery would allow to estimate:

- the effect on the CPUEs estimation for swordfish stocks within ICCAT stock assessment groups,
- the selectivity of this new gear on swordfish and on by-catch species. This should be done evaluating separately surface – LLD and mesopelagic – LLD,
- the potential catchability of this new gear for target species other than swordfish,
- the current spatial distribution and spread of this new gear within national fleets,
- if the trap-line will potentially substitute the hook-line gear or it will remain a gear used alternating it with hooks on the same main line.

STECF conclusions

STECF concludes that the new device, commonly called trap-line, where a main longline is armed with traps instead of hooks, could be classified as a new gear (or multiple gears depending on how these are set on the main line), as its catching ability is not related to hooking but solely to entangling (trapping) swordfish. For this reason, STECF concludes that this new device should not be considered a gear component, but a gear in itself.

STECF concludes that different gear codes should be considered depending on the way the main line of the longline is armed: with hooks, with traps or with hooks and traps (as it is most common currently). This will allow Member States and scientific bodies to collect data on the new device.

STECF concludes that historical on-board observers at sea data and EM data should be collected to investigate if data on trap-lines have already been collected within national observers programs. STECF concludes that a scientific monitoring program of on-board observations should be developed in collaboration with Member States to be able to evaluate the effect of trap-lines use on selectivity on both target species and by-catch species. The effect of this new gear on catch efficiency should be evaluated as well.

STECF concludes that future monitoring of trap-lines should always consider separately traps armed on a mesopelagic LLD and on a surface LLD.

References

Garibaldi, F. 2015. By-catch in the mesopelagic swordfish longline fishery in the Ligurian Sea (western Mediterranean). Collect. Vol. Sci. Pap. ICCAT, 71(3): 1495-1498.

Garibaldi, F., Di Natale, A., Zava, B. 2024. A new challenge for assessing the swordfish fishery: the use of an innovative fishing gear. Collect. Vol. Sci. Pap. ICCAT, 81(7), SCRS/2024/064:1-9.

He, P., Chopin, F., Suuronen, P., Ferro, R.S.T and Lansley, J. 2021. Classification and illustrated definition of fishing gears. FAO Fisheries and Aquaculture Technical Paper No. 672. Rome, FAO. https://doi.org/10.4060/cb4966en

ICCAT, 2016-05. RECOMMENDATION BY ICCAT FOR MANAGEMENT MEASURES FOR MEDITERRANEAN SWORDFISH IN THE FRAMEWORK OF ICCAT.

Lucchetti, A., Petetta, A., Bdioui, M., Gökçe, G., Saber, M., Sacchi, J., Özbilgin, H., Carlson, A. & Carpentieri, P. 2023. Catalogue of fishing gear in the Mediterranean and Black Sea region. FAO Fisheries and Aquaculture Technical Paper No. 695. Rome, FAO. https://doi.org/10.4060/cc7260en

UNIMAR, 2024. Scheda tecnica.

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

7.1 Update on Guidelines for the data transmission monitoring tool and way forward on the assessment of data transmission issues

Background provided by the Commission

DTMT guidelines and assessment cycle were revised and applied in 2024. STECF is requested to reflect on the new assessment cycle whether and to what extent has it improved the data transmission issues assessment. In order to complete the assessment cycle of data issues in the DTMT as to the follow-up given to data issues, COM proposes to cross-check the data issues open since 2018 with the data available in JRC databases through ad-hoc contracts, to be assigned per data call type, i.e. Med and Black Sea (Med & BS), Fisheries Dependent Information (FDI), socio-economics (Annual Economic Report (AER), aquaculture, processing). As there are distinct differences between the data calls, an individual approach is needed per data call, to meet the goal of closing the cycle. The experts assigned will need to have access to: (i) data in the JRC databases, (ii) the actual DTMT issues and (iii) the EWG reports on Annual Reports and Work Plans that deal with data issues.

Specifically for the Med and BS, this process would entail the following steps:

- Launch an ad hoc contract after the EWG on stock assessment, to re-run scripts to check the data and verify issues identified in the DTMT;
- Ask MS to check and resubmit data in the next Med & BS data call;
- Launch an ad hoc contract to check updated data after the Med & BS data call, between July and September to verify whether issues have been addressed.

The above process describes an annual cycle and a separate ad-hoc contract needs to be launched to address the backlog of data issues.

For the FDI, since data is checked during the EWG, this exercise would be only relevant for data submitted up to last year to clear the backlog of DTMTs.

On socio-economics, the EWG this year probably will check the most recent data issues (to be confirmed with EWG focal regarding the ToRs), so the exercise is relevant for the backlog.

Request to the STECF

STECF is requested to reflect on the new assessment cycle of the Data Transmission Monitoring Tool (DTMT) whether and to what extent it has improved the data transmission issues assessment.

STECF is requested to discuss the way forward proposed by DG MARE and revise the ToRs of the ad hoc contracts for the assessment of open data transmission issues.

Summary of the information provided to STECF

The current version of the Data Transmission Monitoring Tool (DTMT) guidelines was provided in an editable document by JRC, including amendments proposed by STECF in previous meetings (mainly PLEN 24-02 and PLEN 24-03).

Draft ToRs for ad hoc contracts to assess data transmission issues of 2018-2023 (and 2014-2017) were also provided to STECF by DG MARE.

STECF comments

Revision of DTMT guidance

STECF notes that the new assessment cycle of the Data Transmission Monitoring Tool (DTMT) has improved the data transmission issues (DTi) assessment. However, as reported by EWG 24-08, EWG 24-15, PLEN 24-02 and PLEN 24-03, not all parties are yet making full use of the DTMT. A number of amendments to the DTMT have therefore been proposed by STECF towards reaching the goal of full utilisation of the tool and to improve the DTi assessment (PLEN 24-02 and 24-03).

STECF revised the guidance document for the DTMT to include all amendments requested by STECF. The main changes are:

- Inclusion of a diagram illustrating the workflow of data transmission issues, with explanations of its elements, to help understanding the overall DTMT concept.
- In the guidance section on the DTMT workflow, it has been clarified that an issue should have a maximum life cycle of two years.
- The guidance text now makes clear that Member States and endusers should append text to their initial comment if they intend to revise it (instead of overwriting text). This also enables DTMT users to track changes over time in ‘Follow-up needed’ cases.
- The definition of "Unsatisfactory" in the section "Guidance to EWG STECF on DTi on commenting and assessing data issues reported in the DTMT" was updated. At the end, the following text was added: “Also, where STECF has noted that the Member State has not provided comments/response.”
- In the guidance for the field “Follow-up needed”, it was clarified that in cases of an “Unsatisfactory” assessment, no “follow-up responsible” shall be given, as the assessment cycle already enables the MS to fix the issue until after the data call.
- In Table 1 of the guidance, the following items have been added to the drop-down menu for the “End User Check” field: “Cannot be checked” (i.e. end user could not check the follow-up)/ “Checked not OK” / “Checked OK” / “Unknown” (i.e. end user reaction unknown) / “Will be checked later”.
- The “STECF EWG DTi assessment” option “not assessed” was deleted from the guidance, because all the other available options are already exhaustive of all possible cases.

ToRs for ad hoc contracts to assess open data transmission issues of 2018-2023 (and 2014-2017)

STECF notes that the draft Terms of Reference for the assessment of open data transmission issues contains a list of six data calls, specifying the assessment of DTi within six different ad-hoc contracts dealing with those data sets. STECF acknowledges that this approach will make the best use of the specific expertise needed to assess the data issues based on these distinctly different data calls.

STECF notes however that for the data transmission issues from 2014-2017, in some case it might be difficult to track back the information to assess the issues, due to limited availability of the necessary background information and data.

STECF further notes that for the fleet economic data, the EWG 25-03 on the Annual Economic Report (AER) will handle the 2024 data transmission issues, while the ad hoc contract will handle issues from data calls until (incl.) 2023.

7.2 EWG 25-05 FDI methodology, EWG 25-10 FDI, and data call

Request to the STECF

STECF is requested to discuss the organisation of these EWGs, clarify the workflow and discuss the draft ToRs.

STECF comments

STECF observes that two STECF Expert Working Groups on Fisheries Dependent Information (FDI) will be convened in 2025: EWG 25-05: FDI data methodology and dissemination (in May) and EWG 25-10: Evaluation of Fisheries Dependent Information for European Fleets to review the data transmitted by Member States under the 2025 FDI data call (in September).

STECF notes that DG MARE provided a first draft for the TORs of the forthcoming EWG 25-05 to STECF. STECF observes that EWG 25-05 will address important methodological issues such as: differences in the definition of metiers and related fields such as GEAR_TYPE, TARGET ASSEMBLAGE and MECH SIZE RANGE of the FDI, the methodology applied to define EEZ indicator, reported refusal rates in Table B, the use of quality indicators requested by FDI data calls and issues that arise during data submission as well as definition of DEEP indicator and the TOTVALLANDG indicator. EWG 25-05 will also follow up on the comparability between AER and FDI data calls and on dissemination of the aggregated data and in particular spatial data on Member State level.

STECF also notes that EWG 25-05 is tasked to a) propose a method to track the use of the FDI data, both publicly available and restricted data and b) to establish an inventory on the number of downloads from the website that might be relevant for other STECF EWGs and data calls.

STECF notes that it was agreed during the plenary to postpone discussions of the transfer of biological data of the Mediterranean and Black Sea data call into FDI to the next Methodology meeting in 2027, after the project on development of the RDBFIS (Integrated Fisheries Information System for the Mediterranean and Black Sea) is finalised.

STECF observes that the EWG 25-05 and 25-10 will finalise the process and scripts for facilitating the process of estimating landings and discards for each exemption of the landing obligation without ad hoc preparatory contracts.

STECF further notes that DG MARE will organise internal discussions of the method proposed to automate estimation of landings and discards for exemptions by EWG 24-11 and its suitability for policy, prior to EWG 25-05.

STECF conclusions

STECF notes that the ToRs of EWG 25-10 should be finalised after EWG 25-05 has concluded and discussed by STECF during the summer plenary 2025.

STECF considers that the two final reports from the EWGs should be prepared and submitted after the finalisation of the two EWGs to be reviewed by STECF PLEN 25-02 and STECF PLEN 25-03, respectively.

7.3 EWG 25-06: Stock assessments in the Western Mediterranean Sea 2025: Hake in GSA 1-5-6-7 and in 8-9-10-11

Request to the STECF

Following previous discussions on stock assessments in the West Med (including in Plenary and during relevant EWGs), STECF is requested to discuss the organisation of EWG 25-06, clarify the workflow and discuss the draft ToRs. The STECF is requested to take note of documents transmitted by Spain to the Commission and provided as background documentation with particular attention to the technical aspects outlined therein.

The hake stocks in the Western Mediterranean assessed by STECF are the most vulnerable stocks under the West Mediterranean MAP and are drivers of the fishing effort regime in the MAP. In 2024 the STECF advice has determined both stocks being below Blim and subject to high overexploitation which has fed into 2025 Council Fishing Opportunities Regulation.

For these reasons, there has been an increased level of scientific and political scrutiny on these stocks. STECF PLEN 24-03 identified a number of areas for improvement in the data. GFCM WG Hake, to which STECF participated in March 2025, set out a number of guidelines and good practices on how to improve the hake assessments in general and in particular for Hake GSA 1-2-5-6-7 and GSA 8-9-10-11. Finally, STECF PLEN evaluated a technical contribution from Spain on this topic in PLEN 25-01.

On the basis of the above STECF EWG 25-06 is requested to: i. update the stock assessment of Hake GSA 1-2-5-6-7 in first priority and GSA 8-9-10-11 in second priority, if time allows; ii. consider the good practices suggested by GFCM WKHKE aiming at overcoming some limitations in the current assessments (ToR 1);iii. based on ii. then provide an updated assessment (ToR 2). In September EWG 25-09 this revised model(s) should be run with data up to 2024 to provide the most updated advice.

Considering there will be a request to GFCM to update the benchmarks in cooperation with STECF, and in line with STECF PLEN 24-03 conclusions for HKE 1-7and HKE 8-11 as well as discussions held in GFCM WKHKE, boundaries are not under scrutiny in EWG 25-06.

Background provided by the Commission

STECF was provided with the document “Explanatory memorandum Med. stock assessment” dated 6th of March 2025, produced by Secretaría General de Pesca del Ministerio de Agricultura Pesca y Alimentación del Gobierno de España.

This document includes four reports:

- Update of campaign indices and landings per unit of effort for the commercial fleet. This report contains annual series of abundance indices from MEDITS survey (2010-2024) and series of Landing per unit effort (LPUE) of the bottom trawl fleet (2010-2023) for the MAP target species and some other species by GSA areas, prepared by IEO.

- List of elements to review (issue list) during a dedicated benchmark for the assessment of hake (*Merluccius merluccius*) stocks in the Western Mediterranean GSAs 1-5- 6-7. This report contains a list of considerations on the need for some revisions of data time series used in the assessment (expanding further back than 2007); MEDITS database; spatial stock definition; stock assessment model and configuration of biological processes and potential influence of environmental issues, for Hake in subareas 1-7, produced by IEO.
- Stock indicators in the GSA 6.This report contains several indicators in this area such as: bottom trawl LPUE by length 2019-2023; Historical landing data (2019-2023), Length based Bayesian analysis of the fishery (LBB model) and several trials of assessment models (SPICT and a4a); followed by several comments on key aspects for the preparation of the coming benchmark, produced by ICATMAR.
- Rationale of the stock assessment by ICATMAR, explaining several research initiatives on the assessment for the main stocks in the GSA 6 area (including hake) carried out by ICATMAR since its constitution.

Background documents are published on:

https://stecf.ec.europa.eu/meetings-calendar/past-meetings

STECF was also provided with a draft of the proposed Terms of Reference for EWG 25-06.

STECF comments

STECF PLEN 24-03, the explanatory memorandum provided by Spain, and the GFCM Ad-hoc Working Group on European hake (WGHKE) (in which STECF participated 11-13 of March 2025), are in agreement on the following points for improving the assessments of hake in EMU 1(GSA 1-5-6-7): Consolidate the current data input for the assessment:

- Series of catches in mass and at length.
- MEDITS survey index series of abundance.
- Consider the potential availability of standardized CPUE from fishing fleets targeting the adult fraction of the population, to improve the information on the adult biomass trends for the assessment.
- Review estimation procedures of catch at age estimates.
- Review growth models currently used to produce the catches at age through slicing taking into account, if possible, for the differential growth rates between sexes.
- Review and test of assessment modelling accounting for potential alternative natural mortality patterns (M vectors).
- Review a4a assessment with special attention to the fishery and survey selectivity modelling.

- Evaluate the utility of alternative assessment models (including surplus production models, and integrated models).

STECF notes that these items need to be considered to improve the current stock assessments and suggests that these are taken into consideration in the planning of EWG 25-06. STECF considers that the remaining points raised by STECF, GFCM and Spain, such as the definition of stock units and geographical boundaries, would be better dealt with within the course of the GFCM benchmark process for hake.

In addition, STECF considers that the TORs should focus on Hake in GSAs 1-5-6-7 as a priority as no revised past data is expected to be available for HKE in EMU2 (8-9-10-11). Furthermore, STECF notes that there is no need to update this benchmarked assessment with the 2024 data from an early delivery of this data in June, as the assessment will be run in the EWG 25-09 in September. Although some preliminary investigation on M vector is considered useful towards the update of the GFCM benchmark in 2026, such investigation should be carried out afterwards during the preparation of the benchmark. Finally, STECF considers that it is reasonable to focus on a single stock to ensure sufficient time and effort for the analysis during the meeting. Taking the above considerations into account, STECF considers that the following changes should be made to the draft Terms of Reference for EWG 25-06 provided by DG MARE:

TERMS OF REFERENCE EWG 25-06

TOR 1: Input Data:

1.1 Review the series of total catch and catches at length by fleets in GSAs 1-5-6-7, and tuning indices (MEDITS survey series or other available LPUE indices), accounting for any new data supplied by Member States not provided previously in the assessment, specifically:

1.1.1 Review the quality of any new information provided by Member States regarding the series of catches and catches at length by fishing fleets for their use as input for hake in GSAs 1-5-6-7 assessment.

1.1.2 Assess the quality of any new information provided by Member States regarding survey series before 2007 for their use as input for hake in GSAs 1-5-6-7 assessment.

1.1.3 Assess the quality of any new information provided by Member States regarding fishery dependent indices (such as LPUE) for their use as input for hake in GSAs 1-5-6-7 assessment.

1.2 Review the growth parameters by sex and sex-combined:
Review the report of the ad-hoc contract which should be launched in support of this ToR for the EWG and propose the growth model(s) to be used for stock assessment.

1.3 Review commercial catch-at-age and survey numbers-at-age inputs, accounting for the revised growth models, if possible accounting for differential growth by sex.

1.4 Calculate a set of M vectors and test their robustness following the methods developed in EWG 25-01

TOR 2: Stock Assessment models:

On the basis of the outcomes of ToR 1:

2.1 Review and update the a4a model for the assessment of hake in GSAs 1-5-6-7 from EWG 24-10 accounting for the former revisions of input data. If data concerning the fishery and surveys in 2024 is available for the EWG, and if time permits, the EWG should also attempt to update the a4a assessment including this data until 2024

2.2 Discuss alternative assessment models which might be presented by the participants to the EWG of hake in GSAs 1-5-6-7.

7.4 Potential EWG: Review of the scientific advice and processes in RFMOs

Request to the STECF

STECF is requested to discuss and advice the Commission on the feasibility, opportunity, timeliness discuss of the draft ToRs provided by MARE for a potential EWG, and to advice on the best way forward.

Background provided by the Commission

Until 2014, the STECF provided annual advice to the Commission by reviewing the scientific advice for all stocks in which the EU had an interest, including those in European waters.

Given the increasing complexity of scientific advice, including methodological advancements and its expansion to address environmental dimensions, the Commission recognizes the importance of re-establishing STECF's role in reviewing scientific advice for Regional Fisheries Management Organisation (RFMOs), as it did until 2014.

The main aim of this re-establishment is to support the Commission's goals by ensuring consistent input into international fisheries discussions and promoting policy coherence across various scientific assessments, which would be particularly valuable to support devising the European Union position in international negotiations in RFMOs.

The draft ToRs for a potential EWG are:

- review the most recent scientific advice on stocks of interest to the European Union in waters managed by Regional Fisheries Management Organisations (RFMO), notably some tuna RFMO (ICCAT, IOTC, WCPFC, IATTC) and non-tuna RFMOs (NAFO, CCAMLR, SIOFA, SPRFMO, NPFC) and provide any appropriate comments and recommendations in light of the External dimension of the Common Fisheries Policy and taking into account its objectives in particular Article 28(a) and 28(d) and Article 29.
- highlight any inconsistencies in stock assessment processes and scientific advice, considering any additional information available. STECF would be also requested to take account of data and information in the RFMO scientific committees reports of any relevant assessment WGs.
- to consider the Harvest Control Rules adopted in the EU recovery plans, management plans and long-term plans or Harvest Control Rules so as the European Commission main guidelines for the consultation on fishing opportunities.
- Review and advise on the management procedures and underlying management strategy evaluation frameworks established in RFMOs, in particular for stocks of interest for the EU and with the aim to ensuring consistency with the CFP and to the extent possible coherence of the EU approach across RFMOs.

Given the extensive range of fishing stocks in which the EU has an interest, their wide regional distribution, and the timing of scientific advice releases, it may be challenging for the STECF to provide timely advice for the EU Commission's preparation for all RFMO annual meetings. To address this, the STECF would be requested to develop a strategic plan for advising the Commission.

This plan could involve organizing RFMOs into two groups—tuna RFMOs (t-RFMOs) and non-tuna RFMOs—and aligning advice delivery with the RFMOs' scientific advice calendars. Additionally, the STECF should focus on providing input and guidance on key areas, chiefly Management Procedures and the underlying Management Strategy Evaluation (MSE) frameworks and processes. The STECF should also offer advice to the EU Commission on trade-offs involved in these processes, ensuring the Commission is well-informed to make balanced decisions.

STECF comments

STECF notes that until 2014 there was a specific request from the Commission for STECF to provide review of the scientific advice on stocks from RFMOs, advisory bodies (i.e., ICES), etc. This request was provided by STECF through the dedicated EWG Review of Scientific Advice which, for the most part, collated the advice in one single report, and in some specific isolated cases provided additional comments and/or corrected mistakes. STECF notes that the review carried out until 2014 was, in many cases, a duplication of work with little added value. In this context, STECF does not see the added value of returning to the same advice format provided previously.

STECF understands the necessity and interest of having a harmonised Commission position regarding the many aspects of the CFP and its overlap with the fisheries evaluations and management discussions within and between the different RFMOs where the EU has interest. STECF notes that many RFMOs, and particular tuna related RFMOs, have moved to Management Plans (MP) agreed through extensive Management Strategy Evaluation (MSE), where complex mathematical models are used to test stakeholders agreed scenarios. Many of these processes involve similar assumptions, models and frameworks and in this context STECF considers that a common broader process based review could be provided by STECF. STECF further notes that this broader process could include social, economic and biological trade-off considerations, evaluation of overlapping RFMOs management measures and policies with the CFP (e.g. operationalization of MSY objectives, HCRs formulations), or consistency between RFMOs advice processes (e.g. presence of external review processes), to name a few elements, but will not include revision and validation of stock assessments.

STECF notes that most RFMOs have publicly available work plans with scheduled stock assessments, MSEs and MP work. This will possibly allow the development of a strategic plan for STECF to provide advice, prioritizing the RFMOs, topics and the periodicity of that advice. The strategic plan should be based on intersessional work that would summarise the process, schedule, and other issues of the RFMOs considered.

STECF notes that the Commission detailed that the advice needed relates primarily to the following RFMOs: NAFO, SEAFO, WCPFC, SPRFMO, IOTC, SIOFA, IATTC, ICCAT, CCAMLR. However, the list can be modified to accommodate the different elements to be considered in the broader review process.

STECF points out that the EWG Preparatory Balance Capacity collects annually for each RFMOs where EU has interest, the relevant data for the calculation of the biological indicators SHI and SAR: F, Fmsy, SSB, Blim or proxy, and elements of management measures that fit the indicator definition (eg. new prohibited species, advices to reduce the fisheries to the lowest possible level etc). These elements are collated in a table annexed to the Balance Capacity report. STECF notes that streamlining this compilation exercise in each RFMO could also be an element considered in the STECF broader process for RFMO advice review.

STECF conclusions

STECF concludes that there is little added value in returning to the same advice format requested by the Commission until 2014. STECF concludes however that a common broader review process based advice, could be provided by STECF.

STECF concludes that based on the outcome of the intersessional tasks, a strategic plan for STECF to provide advice, prioritizing the RFMOs, topics and its periodicity could be developed by STECF in collaboration with the Commission

7.5 Potential EWG: Apprehending, assessing and predicting climate change impacts on international fisheries

Request to the STECF

STECF is requested to discuss the draft ToRs provided by MARE for a potential EWG, and to identify in exchange with MARE on the best way forward.

To allow the EU to drive developments in RFMOs there is a need to define a strategy on the most appropriate approach for including or further integrating climate change considerations into the fisheries management frameworks of these organisations, in a cost-effective manner and without introducing additional unnecessary uncertainties and other elements that could undermine the existing processes and frameworks. Science seems to be the priority area for such endeavour therefore we consider that STECF could support the Commission (DG MARE) in designing a science based approach to be promoted by the EU in RFMOs.

In particular STECF is requested to provide advice on the following topics and any other relevant issues that might emerge during the deliberations of the EWG:

- a snapshot of the state of the art in relation to climate change for each of the RFMOs of which the EU is a member and whether, or to which extent, they can be addressed by the existing processes within each organisation (and if not, what would be needed in addition and/or as a priority);
- best scientific approaches for capturing the potential effects of climate change on RFMO fisheries and fish stocks. This could be RFMO specific, stock specific etc.; Are there any best practices developed around the world that could be used as inspiration for developing a medium to long-term EU approach to climate change in fisheries?
- how to ensure that the scientific advice of RFMO bodies is robust to changes and uncertainties introduced by climate change?
- how can climate change considerations be included in scientific advice without increasing the existing levels of uncertainty?
- are the current data collection and scientific processes in RFMOs sufficient for addressing climate change issues? If not, what is needed and how can this be sourced/developed in a resource-effective manner?
- how can climate change considerations be better introduced in the management frameworks of RFMOs to ensure they are climate proof and resilient to effects of climate change.
- Climate change is an overarching development and an externality impacting on fisheries How can climate change considerations for fisheries management be tackled without putting the full responsibility of dealing with the consequences of this externality on

fisheries alone. What should be done to consider climate change impacts in a holistic framework?
- how could RFMOs contribute to mitigating impacts of climate change?
- can/should climate change be addressed separately from the EAFM?
- define possible horizontal or RFMO specific priorities or approaches to promote in priority to lead the work in developing climate resilient fisheries and fisheries management frameworks;
- define the appropriate approach, resources and process, including a roadmap, for addressing such a request within STECF.

Background provided by the Commission

In recent years climate change has emerged as a common challenge across regional fisheries management organisations (RFMOs). There is now a clear understanding that impacts of climate change can drive significant changes in abundance, spatial distribution, size at age, reproductive success, behaviour, or fitness of marine species and their populations. And even though the impacts can be very different for different species, they do affect marine biological resources and the ecosystems that support them at various geographic, ecological and biological scales. As a result, this can potentially have important impacts on the effectiveness of existing and future conservation and management measures.

Furthermore, the UN Food and Agriculture Organization (FAO) Committee on Fisheries (COFI) highlighted the need for developing guidance on climate resilient fisheries management including a process to facilitate coordination and cooperation among Regional Fisheries Management Organizations (RFMOs)/ Regional Fisheries Bodies (RFBs) and thereby encouraged Members to advance efforts to fully consider climate change in RFB conservation and management measures.

In response to this increasing concern several RFMOs (all tuna and at least 3 non tuna) have adopted resolutions on climate change. Although they are not binding, these resolutions highlight a clear aspiration to understand, assess and mitigate the potential impacts of this new and impactful environmental factor on the fisheries management frameworks of these organisations and ensure that appropriate action is taken in a timely manner to establish adaptative management and climate resilient fisheries, to avoid that their core objectives are undermined.

In general, these resolutions call for actions such as, to:

** consider how fishing activities may be affected by climate change and consider if there are actions that could be taken to further its understanding (e.g. fully utilise available data sources or identify new ones to be collected), reduce or mitigate any potential impacts;*

** support further development of science on the relationship between climate change and target stocks, non-target species, and species belonging to the same ecosystem or dependent on or associated with the target stocks, as well as, and estimates of the associated uncertainties;*

** take into account to the greatest extent possible the best available scientific information and advice available on the potential impacts of climate change in the development of conservation and management measures with a view to adapting to changing conditions and improving the resilience of these stocks, species, related ecosystems, and fisheries.*

Different RFMOs have taken different approaches and to a certain extent have advanced in responding to the aspirations expressed in these climate change resolutions. It appears that science is always at the core of these approaches as a means for providing appropriate management strategies in response to this common challenge. These approaches include, inter alia, mechanisms to test the robustness of existing and candidate management procedures under plausible climate change scenarios within the MSE framework; development of ecosystem and climate Indicators; modelling approaches integrating biological, ecological, and environmental data to help inform policy decisions by projecting the effects of climate change on fish distribution and abundance, enabling fisheries managers to have information to support adaptive strategies; etc.

The EU is already leading by example in combating climate change through the commitment to become a carbon neutral continent by 2050. In addition, ICES, the major body of scientific advice to European Commission to the Northeast Atlantic fisheries, is already integrating climate change as a new pressure to fishing stocks in their advice deliverables, including as an integral part of their ecosystem overviews.

STECF comments

STECF acknowledges the critical importance of incorporating climate change considerations into the management of fisheries resources within the framework of RFMOs.

STECF considers that a phased approach to this topic should be adopted. The process should consist of taking stock of the current scientific knowledge and the procedures employed by RFMOs, followed by a discussion to identify which questions that can be addressed expediently to support DG MARE’s needs. The final phase should focus on developing a process to enact this advice.

STECF considers that the first phase should concentrate on the following RFMOs: IOTC, CCSBT, WCPFC, IATTC, ICCAT, SIOFA, NPFC, SPRFMO, NAGO, CCAMLR and SEAFO. This work should be carried out intersessionally and reported to the STECF Summer Plenary (PLEN 25-02).

Considering the outcomes of phase 1, the second phase should involve discussing research questions relevant to DG MARE and prioritizing those that STECF can address in an operational manner (a list of proposed questions is provided below). This discussion could take place during the STECF 2025 Summer plenary and may overlap with the discussion of phase 3.

Finally, the STECF 2025 Winter Plenary could explore ways to operationalize the advice, potentially through the creation of an EWG. This discussion should take into account the outcomes of the previous phases.

The suggested phases are described in more details below:

1. **Phase 01 – Take stock of scientific findings on impact and mitigation of climate change in fisheries management in RFMOs**
    a. Compile a snapshot of the current state of the art knowledge on climate change for each of the listed RFMOs.
    b. Compile current scientific approaches capturing the potential effects of climate change on each of the RFMO's fisheries and fish stocks.
    c. Compile the current data collection and scientific processes in each of the RFMOs addressing climate change impacts.
        i. Highlight the EU contribution to these processes and EU's role in defining policies.
    d. Compile current procedures used in each of the listed RFMOs that contribute to accounts for impacts of climate change
    e. Do a literature review regarding climate change impacts in fisheries targeting species managed by RFMOs.

2. **Phase 02 – Scientific advice topics (examples of research questions to be answered)**
    a. To which extent can climate change be addressed by the existing processes within each organisation (and if not, what would be needed in addition and/or as a priority)?
    b. Are there any best practices developed around the world that could be used as inspiration for developing a medium to long-term EU approach to climate change in fisheries?
    c. Are the Intergovernmental Panel on Climate Change (IPCC) scenarios, including Representative Concentration Pathways (RCPs) and Shared Socioeconomic Pathways (SSPs) operational for fisheries?
    d. How to ensure that the scientific advice of RFMO bodies is robust to account for changes and uncertainties introduced by climate change?

e. How can scientific advice be adapted to cope with the inherent increases in uncertainty resulting from the consideration of climate change?
f. Are the current data collection and scientific processes in each of the listed RFMOs sufficient for addressing climate change issues? If not, what is needed and how can this be sourced/developed in a resource-effective manner?
g. How can climate change considerations be better introduced in the management frameworks of RFMOs to ensure they are climate proof and resilient to effects of climate change?
h. How can climate change considerations for fisheries management be tackled without putting the full responsibility of dealing with the consequences of this externalities on fisheries alone?
i. How could RFMOs contribute to mitigating impacts of climate change?
j. Can/should climate change be addressed separately from the EAFM?
k. Can better understanding fishers behaviour help make fisheries more resilient to climate change? What kind of adaptation strategies (changes in fishers behaviour) are likely to be adopted? How will they change our understanding of the stock status and the fishing pressure of the currently assessed and emerging stocks?
l. How are the RMFO's managed (management regime) and how does this affect their ability to adapt to new management advice/climate changes?

3. **Phase 03 – Operationalize STECF's engagement**
    a. Define a roadmap to address MARE's request for advice about integrating climate change considerations into fisheries management under the scope of RFMOs. Namely, the approach, resources, process, data needs, capacity building, stakeholder engagement and communication.

STECF conclusions

STECF suggests that phase 1 is carried out intersessionally and reported to the STECF 2025 summer plenary. Phase 2 could then be discussed during the STECF 2025 summer plenary to prioritize research questions and define any intersessional work required to complete phase 3. STECF further suggests that phase 3 is addressed in the STECF 2025 winter plenary, with the aim of drafting the roadmap to be implemented in 2026, including identifying if there is a need for an EWG or not.

STECF concludes that the proposed phases are interlinked, and the outcomes of each phase will significantly influence the results of the subsequent phase.

Reference

European Commission, European Climate, Infrastructure and Environment Executive Agency, Bastardie, F., Feary, D., Kell, L., et al., Climate change and the common fisheries policy – adaptation and building resilience to the effects of climate change on fisheries and reducing emissions of greenhouse gases from fishing: final report, Publications Office of the European Union, 2022.

8. CONTACT DETAILS OF STECF MEMBERS AND OTHER PARTICIPANTS

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

*STECF members marked with an asterix did not attend the meeting.

Name	**Affiliation**[1]	Email
Bastardie, Francois (rapporteur)	Technical University of Denmark, National Institute of Aquatic Resources (DTU-AQUA), Kemitorvet, 2800 Kgs. Lyngby, Denmark	fba@aqua.dtu.dk
Borges, Lisa (rapporteur)	FishFix, Lisbon, Portugal	info@fishfix.eu
Casey, John (rapporteur)	Independent consultant	blindlemoncasey@gmail.com
Daskalov, Georgi	Laboratory of Marine Ecology, Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences	Georgi.m.daskalov@gmail.com
Döring, Ralf	Thünen Institute [TI-SF] Federal Research Institute for Rural Areas, Forestry and Fisheries, Institute of Sea Fisheries, Economic analyses Herwigstrasse 31, D-27572 Bremerhaven, Germany	ralf.doering@thuenen.de
Drouineau, Hilaire (rapporteur)	Inrae, France	hilaire.drouineau@inrae.fr

Name	**Affiliation[1]**	Email
*Goti Aralucea, Leyre	Thünen Institute of Sea Fisheries - Research Unit Fisheries Economics, Herwigstrasse 31, D-27572 Bremerhaven, Germany	leyre.goti@thuenen.de
Grati, Fabio (rapporteur)	National Research Council (CNR) – Institute for Biological Resources and Marine Biotechnologies (IRBIM), L.go Fiera della Pesca, 2, 60125, Ancona, Italy	fabio.grati@cnr.it
Hamon, Katell	Wageningen Economic Research, The Netherlands	katell.hamon@wur.nl
Ibaibarriaga, Leire	AZTI. Marine Research Unit. Txatxarramendi Ugartea z/g. E-48395 Sukarrieta, Bizkaia. Spain.	libaibarriaga@azti.es
Jardim, Ernesto (rapporteur)	Independent expert	ernesto.jardim@gmail.com
Jung, Armelle	DRDH, Techonopôle Brest-Iroise, BLP 15 rue Dumont d'Urville, Plouzane, France	armelle.jung@desrequinsetdeshommes.org
Ligas, Alessandro	CIBM Consorzio per il Centro Interuniversitario di Biologia Marina ed Ecologia Applicata "G. Bacci", Viale N. Sauro 4, 57128 Livorno, Italy	ligas@cibm.it; ale.ligas76@gmail.com
Mannini, Alessandro	CNR IRBIM Ancona, Largo Fiera della Pesca, 260125 Ancona ITALY	alessandro.mannini@irbim.cnr.it
Martin, Paloma (rapporteur)	CSIC Instituto de Ciencias del Mar Passeig Marítim, 37-49, 08003 Barcelona, Spain	paloma@icm.csic.es

Name	**Affiliation**[1]	Email
Motova -Surmava, Arina (rapporteur)	Sea Fish Industry Authority, 18 Logie Mill, Logie Green Road, Edinburgh EH7 4HS, UK	arina.motova@seafish.co.uk
Moore, Claire (rapporteur)	Marine Institute, Ireland	claire.moore@marine.ie
Nielsen, Rasmus	University of Copenhagen, Section for Environment and Natural Resources, Rolighedsvej 23, 1958 Frederiksberg C, Denmark	rn@ifro.ku.dk
Nimmegeers, Sofie (rapporteur)	Flanders research institute for agriculture, fisheries and food, Belgium	Sofie.Nimmegeers@ilvo.vlaanderen.be
Nord, Jenny (chair)	Independent expert	jennymnord@gmail.com
Pinto, Cecilia (vice-chair, rapporteur)	Università di Genova, DISTAV - Dipartimento di Scienze della Terra, dell'Ambiente e della Vita, Corso Europa 26, 16132 Genova, Italy	cecilia.pinto@edu.unige.it
Prellezo, Raúl (vice-chair, rapporteur)	AZTI -Unidad de Investigación Marina, Txatxarramendi Ugartea z/g 48395 Sukarrieta (Bizkaia), Spain	rprellezo@azti.es
Raid, Tiit	Estonian Marine Institute, University of Tartu, Mäealuse 14, Tallin, EE-126, Estonia	Tiit.raid@gmail.com
Sabatella, Evelina Carmen	National Research Council (CNR) – Institute for Research on Population and Social Policies (IRPPS), Corso S. Vincenzo Ferreri, 12, 84084 Fisciano, Salerno, Italy	evelina.sabatella@cnr.it

Name	**Affiliation[1]**	Email
Sampedro, Paz (rapporteur)	Spanish Institute of Oceanography, Center of A Coruña, Paseo Alcalde Francisco Vázquez, 10, 15001 A Coruña, Spain	paz.sampedro@ieo.csic.es
Somarakis, Stylianos	Institute of Marine Biological Resources and Inland Waters (IMBRIW), Hellenic Centre of Marine Research (HCMR), Thalassocosmos Gournes, P.O. Box 2214, Heraklion 71003, Crete, Greece	somarak@hcmr.gr
Stransky, Christoph (rapporteur)	Thünen Institute [TI-SF] Federal Research Institute for Rural Areas, Forestry and Fisheries, Institute of Sea Fisheries, Herwigstrasse 31, D-27572 Bremerhaven, Germany	christoph.stransky@thuenen.de
Ulrich, Clara	IFREMER, France	Clara.Ulrich@ifremer.fr
Uriarte, Andres (rapporteur)	Independent expert	auriartes@hotmail.com
Valentinsson, Daniel (rapporteur)	Swedish University of Agricultural Sciences (SLU), Department of Aquatic Resources, Turistgatan 5, SE-45330, Lysekil, Sweden	daniel.valentinsson@slu.se
van Hoof, Luc	Wageningen Marine Research Haringkade 1, Ijmuiden, The Netherlands	Luc.vanhoof@wur.nl
Velasco Guevara, Francisco	Spanish Insitute of Oceanography - National Research Council, Spain	francisco.velasco@ieo.csic.es
*Vrgoc, Nedo	Institute of Oceanography and Fisheries, Split, Setaliste Ivana Mestrovica 63, 21000 Split, Croatia	vrgoc@izor.hr

JRC experts		
Name	Address	Email
Gras, Michael	DG Joint Research Centre JRC	michael.gras@ec.europa.eu
Hekim, Zeynep	DG Joint Research Centre JRC	hekim.zeynep@ec.europa.eu
Mantapouplou, Danai	DG Joint Research Centre JRC	danai.mantopoulou-palouka@ec.europa.eu
Pierucci, Andrea	DG Joint Research Centre JRC	Andrea.pierucci@ec.europa.eu
Rincon, Margarita	DG Joint Research Centre JRC	Margarita.RINCON-HIDALGO@ec.europa.eu
Virtanen, Jarno	DG Joint Research Centre JRC	Jarno.virtanen@ec.europa.eu
Winter, Anna	DG Joint Research Centre JRC	anna-marie.winter@ec.europa.eu

European Commission		
Name	Address	Email
Aira Martin, Maria	DG MARE, C1	Maria.aira-martin@ec.europa.eu
Alibert-Deprez, Caroline	DG MARE, C1	Caroline.alibert-deprez@ec.europa.eu
Bregeon, Thomas	DG MARE, C5	Thomas.bregeon@ec.europa.eu
Doerner, Hendrik	DG Joint Research Centre JRC, STECF secretariat	Stecf-secretariat@jrc.ec.europa.eu

Dragon, Anne-Cecile	DG MARE, D1	Anne-cecile.dargon@ec.europa.eu
Kostopoulou Venetia	DG MARE, C3	venetia.kostopoulou@ec.europa.eu
Marcoux, Benoit	DG MARE, B2	Benoit.MARCOUX@ec.europa.eu
Mortensen, Martin	DG MARE, D3	Martin.mortensen@ec.europa.eu
Moset, Maria	DG MARE, D3	Maria.moset-martinez@ec.europa.eu
O'Dowd, Leonie	DG MARE, C3	Leonie.ODowd@ec.europa.eu
Osio, Chato	DG MARE, D1	Chato.osio@ec.europa.eu
Palumbo, Nicola	DG MARE, C3	Nicolo.PALUMBO@ec.europa.eu
Perez Perera, Amanda	DG MARE, C1	Amanda.perez-perera@ec.europa.eu
Peyronnet, Arnaud	DG MARE, C3	Arnaud.PEYRONNET@ec.europa.eu
Ranshuysen, Evelien	DG MARE, D.3	Evelien.RANSHUYSEN@ec.europa.eu
Sadowska, Agnieszka	DG MARE, C.3	Agnieszka.Sadowska@ec.europa.eu

Stamoulis, Antonios	DG MARE, D.3	Antonios.STAMOULIS@ec.europa.eu
Sterczewska, Monika	DG MARE, C.3	Monika.STERCZEWSKA@ec.europa.eu

Getting in touch with the EU

In person

All over the European Union there are hundreds of Europe Direct centres. You can find the address of the centre nearest you online (european-union.europa.eu/contact-eu/meet-us_en).

On the phone or in writing

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

— by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),

— at the following standard number: +32 22999696,

— via the following form: european-union.europa.eu/contact-eu/write-us_en.

Finding information about the EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website (european-union.europa.eu).

EU publications

You can view or order EU publications at op.europa.eu/en/publications. Multiple copies of free publications can be obtained by contacting Europe Direct or your local documentation centre (european-union.europa.eu/contact-eu/meet-us_en).

EU law and related documents

For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex (eur-lex.europa.eu).

EU open data

The portal data.europa.eu provides access to open datasets from the EU institutions, bodies and agencies. These can be downloaded and reused for free, for both commercial and non-commercial purposes. The portal also provides access to a wealth of datasets from European countries.

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.

Science for policy

The Joint Research Centre (JRC) provides independent, evidence-based knowledge and science, supporting EU policies to positively impact society

EU Science Hub
Joint-research-centre.ec.europa.eu

Publications Office
of the European Union