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Social Data in Fisheries (STECF 23-17)

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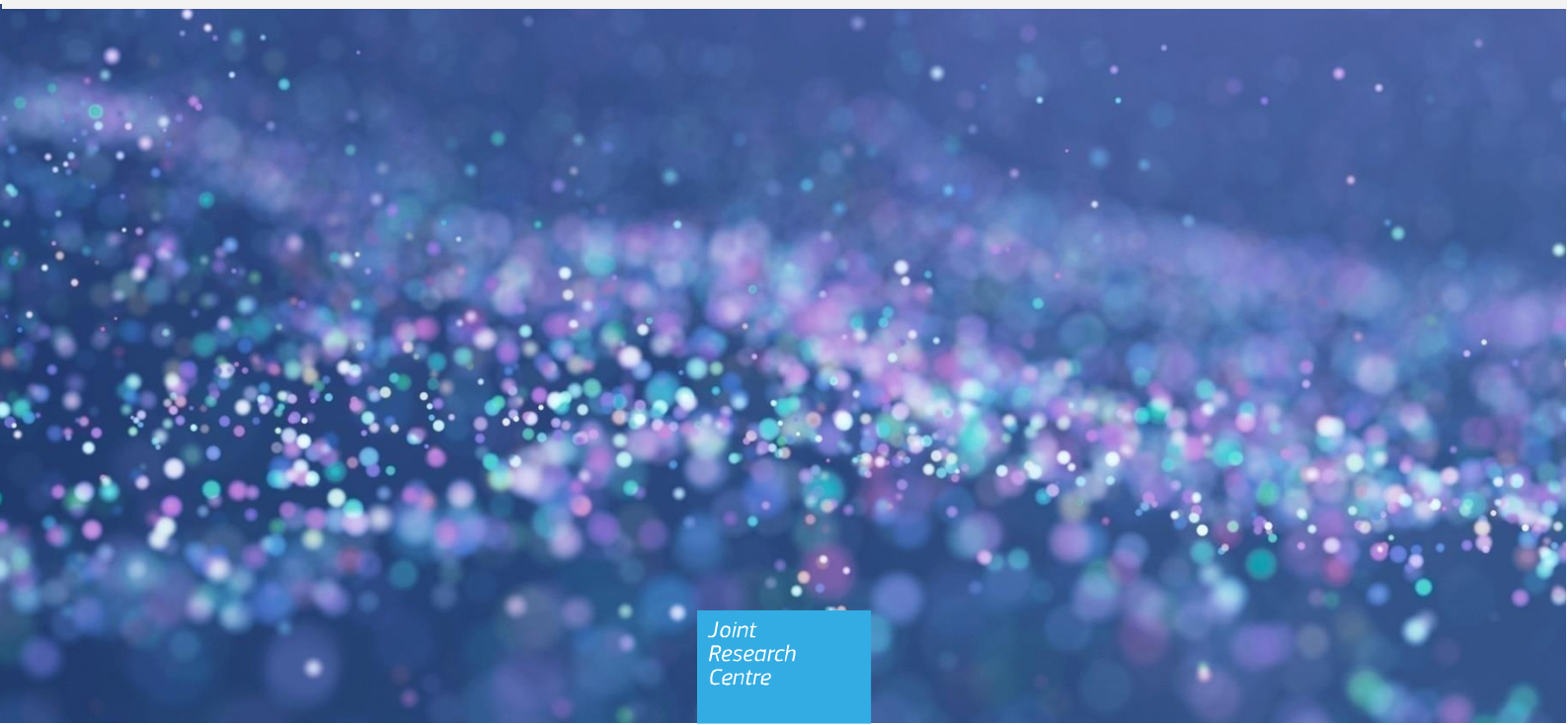

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CONTENTS

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. This report builds on earlier EWG results (19-03, 20-14, 22-14) and further develops the methodologies for the collection and analysis of social data in fisheries. In particular it addresses the development of National Fisheries Profiles (NFP) and advocates the development of a web based version of the NFP. In addition, it reflects on policy questions generated by DG MARE and indicates how social data could assist in answering these policy questions. Finally, the report evaluates responses of the Member States towards the European Commission's (EC) questionnaire about the implementation of Article 17 of Regulation (EU) No 1380/2013.

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SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (STECF) – Social Data in Fisheries (STECF-23-17)

Request to the STECF

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

Overview of EWG 23-17

This report on the social dimension of the CFP is the fourth report in a series of STECF reports operationalising the social dimension of the CFP and in particular the development of an analytical framework and indicators to provide data and information to assess the social aspects of the CFP.

The group met virtually, from the 16th until the 20th of October 2023 and consisted of 19 independent experts of which two were STECF members (co-chairs), two members from JRC and two observers. The meeting was attended on a regular basis by representatives from DG MARE.

The report addressed three specific areas:

- ToR 1 assessed and updated the National Fisheries Profiles (NFP) based on the Dutch, Danish and Spanish experiences.
- ToR 2 addressed the relevance of social data to answer policy questions drawn up by DG MARE.
- ToR 3 addressed the responses of the Member States towards the European Commission's (EC) web-based questionnaire developed by EWG 22-14 about the implementation of Article 17 of Regulation (EU) No 1380/2013.

STECF general comments

STECF considers that the EWG adequately addressed the three TORs.

STECF notes that the three ToRs are interrelated, with the National Fisheries Profiles (NFPs) assessed under ToR 1 being part of the social indicators framework that is addressed in ToR 2. Additionally, the allocation of fishing opportunities (subject of the questionnaire in ToR 3) could be included in the National Fisheries Profiles (ToR 1) and a possible subject of study for the framework in ToR 2.

STECF notes the NFPs need to provide an analysis of the social impacts of the policy developments on the fishing communities to be meaningful. For this, the importance of developing community profiles needs to be underlined.

STECF notes that to properly analyse and interpret the social aspects of fisheries management, national expertise is required. For the next data call for social data, a dedicated EWG is needed with experts from the relevant Member States to arrive at a proper and context specific interpretation of the national social data.

STECF notes that when a social data call is issued (currently every three years), an additional EWG may be required to analyse and interpret social data. This implies that for the current years an annual EWG is required to further the development of the NPF, set of policy questions and related social indicators, data sets and additional ways of collection data.

STECF comments on specific TORs

ToR 1: Assessment and conclusion of the three developed national fisheries profiles (for the Netherlands, Denmark and Spain)

STECF notes that, based on the experience of the NFPs developed for the Netherlands, Denmark and Spain as well as experiences from Greece and France, several observations were made by the EWG on the preparation of NFPs:

- The development of NFPs requires sufficient time to collect data, reflect on the information gathered, allow analysis, and discuss with peer reviewers.
- The development of NFPs requires a multi-disciplinary team including a social scientist and an economist who have access to the different datasets. The disciplines of the experts should allow the interpretation of the different data sources available and provide context to the NFPs.
- Typically, a team consists of two experts who would require between 10 to 14 days (hence 5-7 days for each expert, depending on the size and complexity of the Member State's fisheries) to prepare the NFP. The social scientist should coordinate the task.

STECF notes that data availability differs temporally and between Member States. Some differentiation in preparing the NFP will be unavoidable, but as much as possible comparable data sources and time periods should be used.

STECF re-iterates the observations of PLEN 23-01 that web-based NFPs would facilitate regular updates as needed, allow customised reports to be produced for the needs of end-users and support an active link to data with automatic updates. A web-based version will also facilitate standardisation and harmonisation among Member States.

STECF notes that the systematic comparative analysis across the EU on fishing dependency developed a decade ago (JRC, 2012-2013) needs to be updated. There are immediate gains (the methodological approach is defined and can be improved with the knowledge advances and evidence delivered by ICES WGSOCIAL) supporting the development of NFPs, community profiles and the understanding of trends across Europe.

STECF notes that the EWG 23-17 discussed the possibility of an Intersessional Subgroup to be established under RCG ECON which will focus on potential improvements and refinements in the collection and analysis of social data in EU fisheries and be custodian of the NPF web-based application. While STECF agrees that the national fisheries profiles need a (virtual) home, STECF has doubts whether RCG ECON is the proper hosting platform. As there are no apparent alternatives for hosting NFPs, possible options should be further discussed by STECF with DG MARE.

ToR 2: Selection of Social indicators

STECF notes that EWG 23-17 analysed the seven questions and their sub-questions provided by DG MARE in the scoping paper for STECF EWG 23-17 'policy questions for social indicators'. For each question, the EWG identified i) the social concepts associated,

ii) the potential indicators, iii) whether the data was already available and where or how to collect it and iv) at which level the data should be collected.

STECF notes that the number of identified indicators is currently high. Discussions with the wider stakeholder community would help to prioritise and identify the most relevant policy questions and the related indicators to be monitored.

STECF notes that the development of the indicators which will then be integrated in the wider framework of ecological and economic data should be considered by future Social Data EWGs.

ToR 3: Member States' responses to questionnaire over article 17 implementation

STECF notes that the online questionnaire developed by EWG 22-14 was completed by 22 Member States covering all coastal Member States. This is higher than in previous years.

STECF notes that the level of completeness of the Member States answers is difficult to assess because of a lack of context or an available baseline for fleets, areas, fisheries, and species.

STECF notes that there are multiple interpretations of the term "fishing opportunity", from TAC and quotas to effort limits and spatial and temporal allocations. The definition of fishing opportunities should be better specified in the questionnaire, as it has a strong influence on the quantity of information delivered (e.g., in the Mediterranean there is a large majority of stocks that are not subject to quotas). Too narrow a definition of fishing opportunities potentially will result in some relevant information not being provided.

STECF notes that quite a substantial part of the information in the questionnaire is expected to be stable over time and an annual questionnaire would be repetitive. Therefore, STECF considers that integrating the allocation process of fishing opportunities in the NFP with revisions every three to five years or when important changes are expected (e.g., after a decommissioning scheme or a major policy change such as Brexit) may be more suitable.

STECF notes that most Member States include the use of historic rights as their main criterion for allocation. STECF notes that whether this criterion has social, economic or ecological characteristics depends on how its elements are defined (e.g., type of stock, fleet segment, duration of period considered). STECF further notes that Member States that allocate their TAC under a ITQ/TFC system report that this does not fall under article 17, can nevertheless describe the criteria used for their primary allocation of rights (state to PO/firms/individuals) even if data on the secondary allocation (e.g., through the market) is not known.

STECF notes that there are quite a few examples were specific ecological or social criteria are used in the allocation of fishing opportunities. Several countries (e.g. Spain, Italy, Croatia, and Bulgaria) mention support to fishing communities as one of the social criteria justifying the allocation of fishing opportunities.

STECF conclusions

STECF concludes that the work of the EWG 23-17 has advanced the integration of the social dimension in the management of fisheries by addressing the ToRs.

STECF concludes that every three years, when a data call for social data is issued, a second social EWG may be required. This EWG would be additional to the annual EWG currently advancing the development of the NPFs, set of policy questions and related social indicators, data sets and additional ways of collection data.

ToR 1 - Conclusions on NFP importance

STECF concludes that the work on the NFPs is an important step towards the integration of the social dimension into fisheries management and fisheries advice and should be extended to all Member States. How to organise the establishment of the remaining NFPs is for DG MARE in conjunction with STECF to decide.

STECF concludes that while planning for the development of initial national fishing profiles, particular attention should be taken to ensure the experts are allocated sufficient time to do the work; have access to and knowledge of the existing data; and that an interdisciplinary team of experts is required to provide enough context to the analysis.

STECF re-iterates its conclusion of PLEN 23-01 that the NFPs should be web-based, to allow for regular partial updates and possibly production of tailor-made reports for end-users needs. A web-based version will also facilitate standardisation and harmonisation among Member States.

STECF concludes that advances are needed on the community profiles development, including the definition of a number of critical notions such as the concept of community. This will be further developed in future Social Data EWGs.

ToR 2: Selection of Social indicators

STECF concludes that the next step will be for DG MARE to consult the wider stakeholder community to prioritise the set of policy questions. Based on this consultation, a second analysis of relevant social indicators and way of collecting data could be developed.

STECF concludes that future Social Data EWGs should further the work on how social data can answer policy relevant questions and develop indicators which will then be further integrated in the wider framework of ecological and economic data.

ToR 3: Member States' responses to questionnaire over article 17 implementation

STECF concludes that the description of the allocation of fishing opportunities including the implementation of article 17 should be included in the NFPs and be updated when necessary, but at least revised every three to five years.

Given the limited number of NFPs available, and the expected time to complete them for the remaining Member States, STECF concludes that an improved version of the current questionnaire be used, encompassing the improvements suggested by EWG 23-17 relating to the completeness of the answers and the definition of fishing opportunities.

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

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REPORT TO THE STECF

EXPERT WORKING GROUP ON SOCIAL DATA IN FISHERIES (EWG-23-17)

Virtual meeting, 16-20 October 2023

1 INTRODUCTION

This report on the social dimension of the CFP is the fourth report in a series of STECF reports operationalising the social dimension of the CFP and in particular the development of an analytical framework and indicators to provide data and information to assess the social aspects of the CFP. In particular the report addresses three specific areas.

The first being an assessment and update of the National Fisheries Profiles. Based on the Dutch profile, which was evaluated last year in EWG 22-14, two additional profiles developed under two ad hoc contracts for Spain and Denmark, and experiences of working with the NFP in Greece and France the current template for the NFW has been evaluated.

The second part addresses the relevance of Social data to answer policy questions. DG MARE has drawn up a concept note of relevant policy questions, which EWG 23-17 has assessed and evaluated in terms of relevance, possibilities of generating indicators to address the question and method of generating relevant data, such as through the NFP, regular data collection programmes, questionnaires, interviews, focus groups or other methods.

The third part addresses the responses of the Member States towards the European Commission's (EC) questionnaire about the implementation of 17 of Regulation (EU) No 1380/2013, based on the web-based questionnaire developed by EWG 22-14.

The different sections of the current report are interrelated, as the first one (TOR 1NFP) is part of the framework that is addressed in TOR 2. Additionally, the allocation of fishing opportunities (subject of the questionnaire in TOR 3) is also relevant for the NFP and a possible subject of study for the framework in TOR 2. Correctly defining the subject of study (e.g. fishing opportunity, historic catch criteria) would be a part of the framework which has revealed itself challenging when meeting the practical approach of the questionnaire (TOR 3). The EWG notes that the social profile can provide a more profound description and analysis of, for example, the national fishing opportunity allocation system. A summary of the allocation system and its output by fleets would be relevant, and it would be necessary to reinforce the focus on some social issues: historical transformations trends and cultural changes. It is challenging to understand the current situation without these issues, and NFPs need to be technical and provide at the same time a social understanding of the impacts of these transformations on the people and their communities.

The report has been produced by experts from DG JRC and a group of experts convened under the Scientific, Technical and Economic Committee for Fisheries (STECF). The group consisted of 19 independent experts and two observers. The meeting was attended on a regular basis by DG MARE. The list of experts can be found in section 8.

1.1 Terms of Reference for EWG 23-17

Background information

One of the objectives of the Common Fisheries Policy[1] (the CFP Regulation) is to promote social sustainability. The current legal framework refers to labour conditions, health and safety, as well as to job creation and training, social inclusion and a fair standard of living. Fisheries throughout Europe have undergone major structural changes, leading to important social consequences for both individual fishers as well as for fishing communities. In a number of fishing communities and regions of the EU, the social importance of the fisheries sector outweighs its direct economic contribution.

The collection of data for calculating the social indicators for the EU fishing fleet, aquaculture and fish processing industry is required under the Data Collection Framework (Regulation (EU) 2017/1004 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the CFP). The multiannual program for data collection (EU MAP) (Decisions (EU) 2021/1167 and 2021/1168) specifies social variables to be collected every three years from 2018 onwards:

- Employment by gender;
- Full Time Employment (FTE) by gender;
- Unpaid labour by gender;
- Employment by age;
- Employment by education level;
- Employment by nationality;
- Employment by employment status;
- Total FTE National.

This data is collected within the Annual Economic Data Call.

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

STECF EWG 20-14 was tasked with building upon the findings of EWG 19-03. The EWG was requested to further develop the methodology for:

1) the collection of social data in fisheries, to be applied for the collection of social data for the data call 2021

2) the subsequent analysis and

3) the use of these data.

Additionally, the EWG was tasked with assessing the impact of the CFP and the implementation of its Articles 5.2 (access to waters) and 16 and 17 (fishing opportunities) on the social situation of small-scale coastal fishers and their communities.

STECF PLEN 20-03 concluded that if the suggestions for National and Community profiling of the fishing sector were operationalised, as recommended under EWG 20-14, this would indeed allow for more data and information to become available to implement assessments

[1] REGULATION (EU) No 1380/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013.

of the social impacts of fisheries management measures. The EWG 20-14 report provides a first detailed description and methodology which would enable the construction of both National and Community profiles. To further expand this deliverable, STECF concludes that there is a necessity to produce clear and unified definitions of concepts and variables used. This unification should be achieved across all bodies currently involved in the development of social indicators such as STECF, RCG ECON and ICES WGSOCIAL[2].

STECF EWG 22-14 took the process of developing and operationalising a framework for the analysis of the social dimension of the CFP a step further. An important discussion was held on the framework, definition, method, and operationalisation of National and Community profiles. The development of these profiles, along with data collected under the EU data collection programmes, are of utmost importance, as they will constitute the backbone of the analysis of developments in the social domain of fisheries. EWG 22-14 also notes the importance of end-users and/or stakeholder involvement in the process of developing the framework and its indicators in order to allow data collected to become useful information.

EWG 22-14 proposes two parallel actions to achieve progress in operationalising the social dimension: a) to launch a stepwise process that ensures relevance and credibility of the indicators to be developed; b) to implement short-term actions that take advantage of ongoing developments. Designing a stepwise process responds to the fact that indicators need an underlying conceptual framework.

In addition, alignment of definitions and methodology is needed across the different fora currently developing social indicators (STECF, RCG ECON and ICES WGSOCIAL) as well as across STECF reports themselves. EWG 22-14 notes that additional capacity on social science being available to STECF would facilitate this process.

Terms of reference EWG 23-17

Building on the conclusion of STECF PLEN 23-01, the EWGs 23-17, 22-14 and 20-14 reports, the RCG ECON 2021[3] report, and the national profile pilot study resulted from the FISHN'CO deliverable 3.4 (on the Netherlands), the ad hoc contract supporting this EWG that developed two additional national profiles (ES, DK), EWG 23-17is requested to carry out the following tasks:

1. Provide an assessment and conclusion of the feasibility and usefulness of the three developed national fisheries profiles in delivering data and information for community profiling and fisheries management impact assessments. Based on the profiles developed, finalise a format for future national profiles.
2. In order to progress the inclusion of additional social indicators in the Annual Economic data call or a possible separate data call and making use of:
   - the national profiles created, and
   - the scoping exercise (delivered by DG MARE ahead of the EWG 23-17) with policy-makers to scope the questions that need to be answered with the data collected and determine the specific policy relevance of individual concepts and indicators,

   the STECF is requested to work out a suggested process (via the following three consecutive stages) for developing social indicators (STECF EWG 22-14, section 6.2)

[2] For completeness sake, GFCM developments should be cross-checked in this discussion.
[3] As well as 2022 report, if this is available at the time the EWG 22-14 takes place.

1. Develop a conceptual framework which positions the social indicators in the suit of fisheries indicators (ecological, environmental, economic), providing the linkage for integrative analysis and advice.
2. Implement a conceptual validation of the methodology and data proposed. Make a start with the conceptual validation, methodological and data considerations. Selection of the initial set of criteria to be embedded in other ongoing activities such as the ICES WGSOCIAL systematic review and the EWG 22-14 findings under TOR 1 and 2.
3. Based on the online survey transmitted to Member States in the summer of 2023 on the transparency and criteria of allocation of fishing opportunities in each Member State[4] under Article 17 of the CFP Regulation, EWG 23-17 is requested to examine the responses from Member States. For each of the 2 topics (transparency and allocation of criteria), the EWG is requested to provide:

    a. A detailed analysis about each national system.
    b. Specific indications about missing information or information that does not allow a meaningful assessment of the different systems or criteria applied by Member States. These indications should be formulated as questions for Member States.
    c. A synoptic overview of all national systems, potentially in table format.
    d. A list of best practices (best practices being understood as practices with positive impact) or, if best practices cannot be identified, a list of novel practices (understood as practices that differ from traditional practices).

[4] Article 17 concerns the coastal member states only, as only they have marine fishing fleets.

2 TOR 1: NATIONAL FISHERIES PROFILE

2.1 Introduction

During EWG 23-17 the development of National Fisheries Profiles (NFPs) was discussed further, following ToR1: *Provide an assessment and conclusion of the feasibility and usefulness of the three developed national fisheries profiles in delivering data and information for community profiling and fisheries management impact assessments. Based on the profiles developed, finalize a format for future national profiles.*

The history of developing NFPs is summarized below:

- Following recommendations from the STECF EWG 19-03, an expert report was written by A. Delaney (2020) with a template for national profiles.
- EWG 20-14 provided a detailed template with a comprehensive list of descriptors, outlining potential data sources and additional guidance.
- Based on EWG 20-14 recommendations, the STECF:
    - Defines National Profiles to depict the national structure of the fishing fleet(s), including the fisheries' social, cultural and economic aspects and witnessed trends, developments and (social) issues.
    - Sets updating periodicity once every three years to have value.
    - Links development in conjunction with data collected under the DCF and as, for example, reported in the AER. However, STECF notes that the social profile can provide a more profound description and analysis of, for example, the national fishing opportunity allocation system.
- EWG 22-14 made several suggestions for aligning National profiles across related groups (STECF, RCG ECON, ICES). An initial assessment of the NFP was performed based on the results of the FISHN'CO study for the Netherlands. As a result, the original template was updated.
- Based on the updated template, 2 more NFPs were asked to be made, in Spain and Denmark. The findings of this proof of concept, with two contrasting countries, have informed the STECF EWG 23-17 on social data in EU fisheries. Apart from these two NFPs, efforts have also been taken to develop NFPs in Greece and France. The experiences of these two countries were discussed as well.

2.2 Assessment of the National Fishing Profiles

National Fisheries Profiles are detailed and comprehensive documents, and throughout the process of developing the pilot NFPs, several challenges were encountered. The assessment below is based on the three NFPs developed in 2022 and 2023 (the Netherlands, Denmark and Spain), as well as lessons learned from the Greek and French presentations that provided additional insights that complement those of the three case studies. The challenges are mainly related to the target audience and purpose of the document, available time, data, and the current NFP format. Proposed solutions by the EWG 23-17 include creating a web based NFP that is updated on a regular basis overseen by a designated group of people and simplifying the NFP format with a guidance document (see section 5).

Primarily, there was some confusion regarding the target audience and purpose of the NFP. It is necessary to make clear who the target audience is (i.e. researchers, policy officers and/or fishing industry) so that the content of the NFP can be adjusted as well as the way it is presented (e.g., paper document versus web-based document). The report's length and structure may also alter depending on the target audience. In addition, each MS has a different context meaning that certain topics in the current NFP template (e.g.

on inland fisheries) are relevant for some MS but not for others. The NFP would be better fit for purpose if there was better guidance to go along with the template, such as making it explicit what information is required as a minimum and what information helps illustrate the countries' social dimensions related to fisheries. The adaptability and flexibility of the template is crucial, especially since developing NFP is an iterative process. The authors of the three NFPs (the Netherlands, Denmark and Spain) expressed a lack of available time for creating these profiles. Due to the shortage of time, part of the NFPs content was rather copy-pasted with limited time for reflection or further analysis. Additionally, because there was not enough guidance on what topics (i.e., sub-headings) should be included, time was sometimes spent on data compilation of statistics and background material rather than prioritizing the social elements. As a result, the social dimensions in the NFP may remain rather superfluous. The EWG 23-17 highlighted that the Member States (MS) are heterogeneous and as such, compilation of certain topics may be more time consuming for some member states compared to others. For example, MS with a wide range of fleets and territorial waters will take longer to compile. Also, some MS have limited access or availability of social data. The EWG notes that in any case the initial data compilation of a MS NFP will take longer than updating existing versions as not all data and information requires an update.

Challenges related to the data collection processes and the analysis of social variables for the EU fishing fleet were encountered. These concerned data availability, data accessibility, analysis of the data and updating the relevant data.

- Data availability differs between the MS. Depending on the type of data, the availability of the datasets per time period can also differ due to various data sources or different responsible authorities at MS level. It is important to be able to navigate easily and quickly between the different (types of) data. In the NFP, the authors should indicate under the topics where limited data is presented, whether the topics are not relevant to the specific MS, or whether there was no data available for that topic. It is important to differentiate between these two reasons; in case of limited data availability this can be addressed by the MS.
- Another issue encountered was that not all data is accessible to those developing the NFP. For example, if the authors are not part of a national institute responsible for data collection the data may be difficult to access either because data is not publicly available, or because not at the relevant aggregation level (this can be the case when the data is considered confidential). In that case the authors will experience challenges to write the NFP and the quality/relevance of the NFP may be compromised.
- Regarding the compilation and analysis of data, it was observed that compiling data for these profiles involves a wide variety of data and expertise. The author(s) would have benefited from a larger team with different expertise to ensure a comprehensive overview and analysis of all relevant data. A larger team – lead by a social scientist- would have also aided in additional reflection on the content of the document.
- Lastly, questions were raised concerning how often, and to what extent the data should be updated. In the current document-based format, updating all the required data will be a lengthy and cumbersome task. However, if the NFP would be available in a web-based format, updating sections and their data would be easier.

In addition to the difficult task of updating the current profiles, the document-based approach with an elaborate template is not ideal. The NFPs are lengthy (between 20-120

pages) and sometime repetitive sections (e.g. information on governance). Making it unclear where to produce specific information.

Based on these challenges, and after reviewing the developed NFPs, the EWG 23-17 proposes two actions: to develop a simplified structure of the NFP format with a guidance document, rather than an elaborate list of sections and subsections, and to develop a web-based national profile. The guidance document should help prioritize which aspects of the template should be focused on (see Annex 1). The development of web-based national profiles will be described in section 2.2.

2.3 Process NFP in relation to social data

The produced NFPs evidence the need for systematic data gathering and analysis. The current DCF gathers social data for fisheries, aquaculture and processing. The social data for the fisheries sector is reported once every three years, for the aquaculture and processing sectors once per two years. Until now, there has only been one specific meeting with social experts to analyse the social data for fisheries available from the DCF in 2019; the outcome was included in the STECF 19-03 report. Since then, social data available have received limited attention to provide rather scant descriptive analysis (see AER 2022).

The EWG 23-17 discussed that it would be good to assess the social data for fisheries the next time they are gathered (2024) again in a separate specific meeting with social experts. Where NFPs have been developed, these can be used to contextualize the social data. This will be a good test to see whether the NFPs can indeed cater for this need, and, if not, it can be assessed which changes are needed which can be taken up in the guidance document. The reason why a separate meeting is needed, is because the regular EWG on social data already has a packed ToR, devoting the annual meeting to analyse the social data without having a separate meeting for this will delay progress on the other ToRs. Where relevant it would be good to make links between experts analysing social data for the processing sector and aquaculture. For instance a topic as foreign workers is relevant both for fisheries as for the processing industry.

In order to progress with the NFPs it would be good to have the Commission call upon the Member states to develop more NFPs. It is thereby important that they allocate enough time to it (i.e. at least 80 hours) and make sure the authors of the NFP will have access to required data. This requires special attention as in many countries social scientists often do not work in the applied marine research institutes responsible for collecting the data under the DCF.

2.4 Web-based national profiles

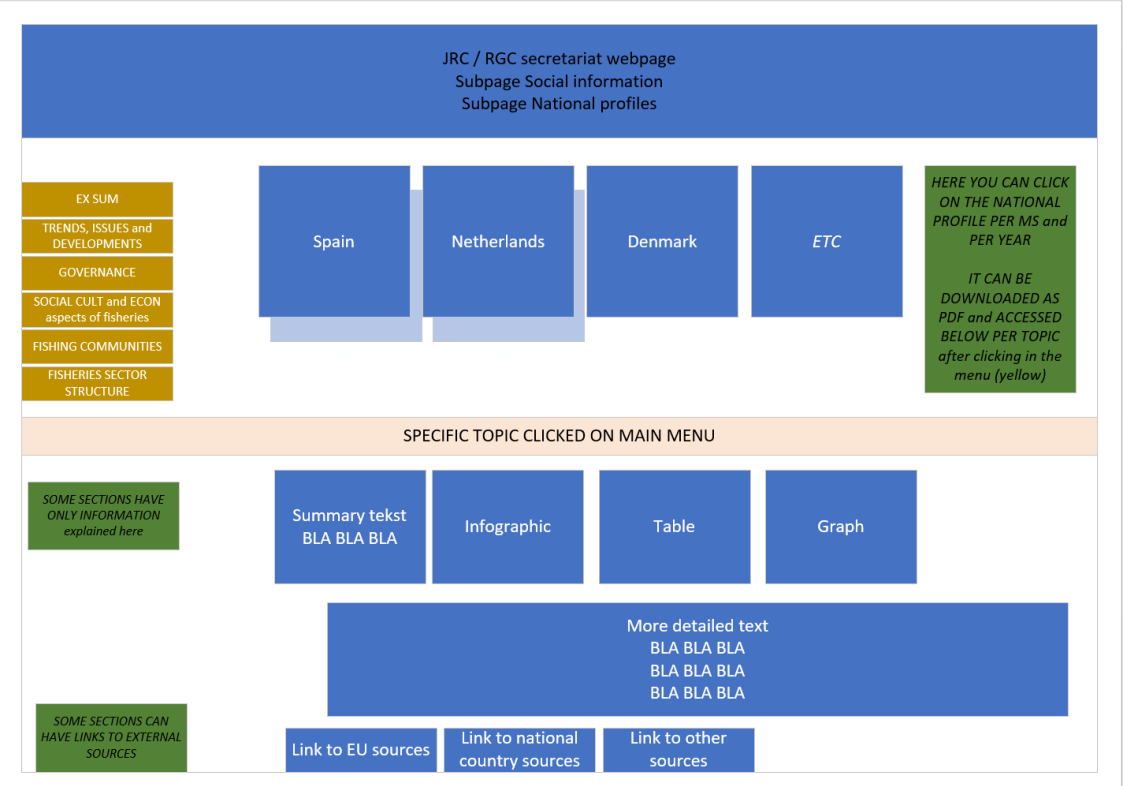
EWG 23-17, following proposal from STECF 22-14[5] proposes the national profiles become web-based and suggests the NFP to be hosted either on the JRC or RCG secretariat website. The web-based approach allows also to ensure transparency, both as a mandatory request (Aarhus Convention) and as a good governance principle required in the EU.

[5] STECF notes that a web-based profile rather than a pdf document, would allow easier linking to data presented (and analysed) elsewhere and easier updates of (parts of the) data, as well as easier comparability between Member States (STECF 22-14, page 3).

The page (see figure 1 below) is built with a menu in the left showing the main topics. From top to bottom the web menu starts with the *executive summary*, followed by the *trends, issues and developments*, *governance*, *the social cultural and economic aspects of fisheries*, *fishing communities* and ends with the *fisheries sector structure*. *General description of society* will be part of the executive summary. And *methods and data* will be a general button for all national profiles. Unlike in the current template of the paper based NFP, the web-version highlights the social topics first: governance and the social, cultural and economic aspects of fisheries (following the two high level topics: *summary* and *trends).* In addition, in the online version *fishing communities* is selected as a separate topic in the main menu. The menu, thus, does not begin with the fisheries sector structure (about the production sector, geographical areas, fishing practices / systems, recreational maritime fishing, processing trade and markets) as this is the info that mostly is available from different data sources the NFP links to.

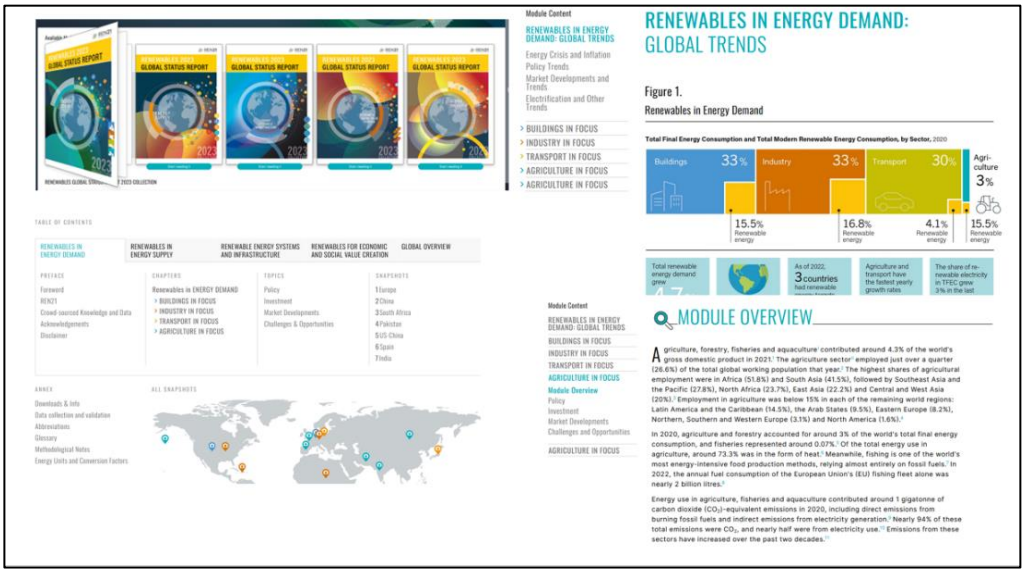
Users can click on a country to have the full NFP as PDF file, from this year and previous years. And once a MS is selected, one can click on topics in the menu (at the left). Each topic will have subtopics that can be clicked on from a drop- down menu. Once a topic is selected, this will be presented in the 2nd half of the screen. At the left top a summary text will appear in a small box, next to it some main infographic, tables or graphs that illustrate the main findings of that topic best. A text with additional analysis will come after. Also, when applicable, links to more information and/or data sources will be provided at the bottom of the page.

Figure 1 A draft layout of the webpage hosting the NFPs as web-based documents



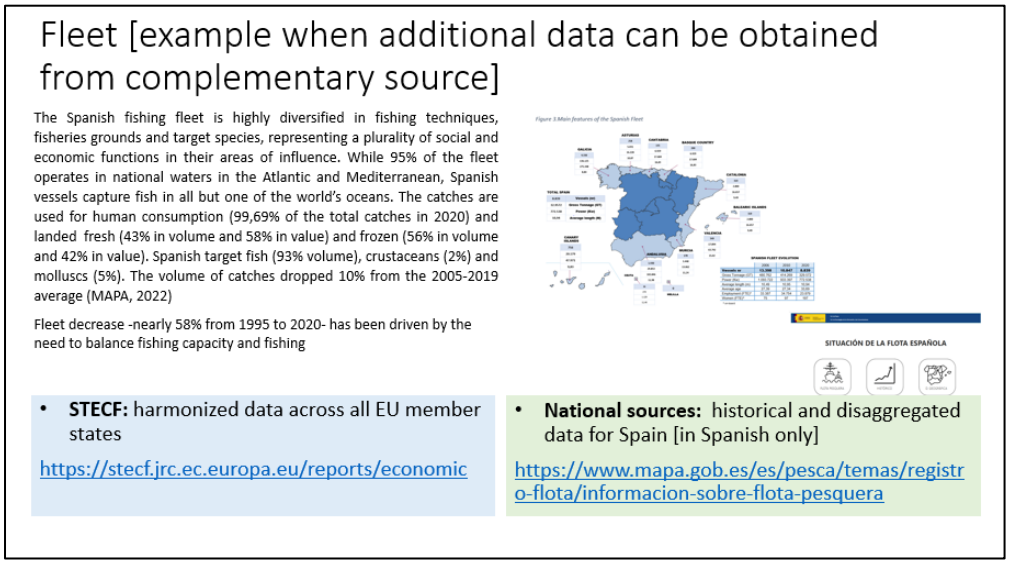
The Webpage needs to be functional and appealing. The following figure is a visual example taken from a website that combines infographic, qualitative, quantitative data and detailed text.

Figure 2 Example of a webpage presenting reports and its content (both qualitatively as quantitatively) in an attractive way (Source: https://www.ren21.net/reports/global-status-report/



The tree structure of the web-based NFP guides navigation through different topics and provides a systematic approach to the different NFPs. For instance, the Governance module has a subheading on the Common Fisheries Policy. When the NFPs are web based, a common section can be written for all NFPs on the basics of the CFP, allowing further text per profile to focus on how that policy has and is shaping fisheries development and current performance. The web structure also allows the author to guide the reader in finding and understanding the information and data available, while ensuring comparability across NFPs. For instance, there can be additional sources of data that expand what is presented in the NFP. In those cases, both the STECF harmonized data and the national sources will be highlighted as complementary sources.

Figure 3 Example from the Spanish NFP when additional data can be obtained from a complementary source



Likewise, there are topics where sources may provide different data on the same variable. In those cases, the NFP will point to the sources using the logic described above, indicating where to find the databases with different data.

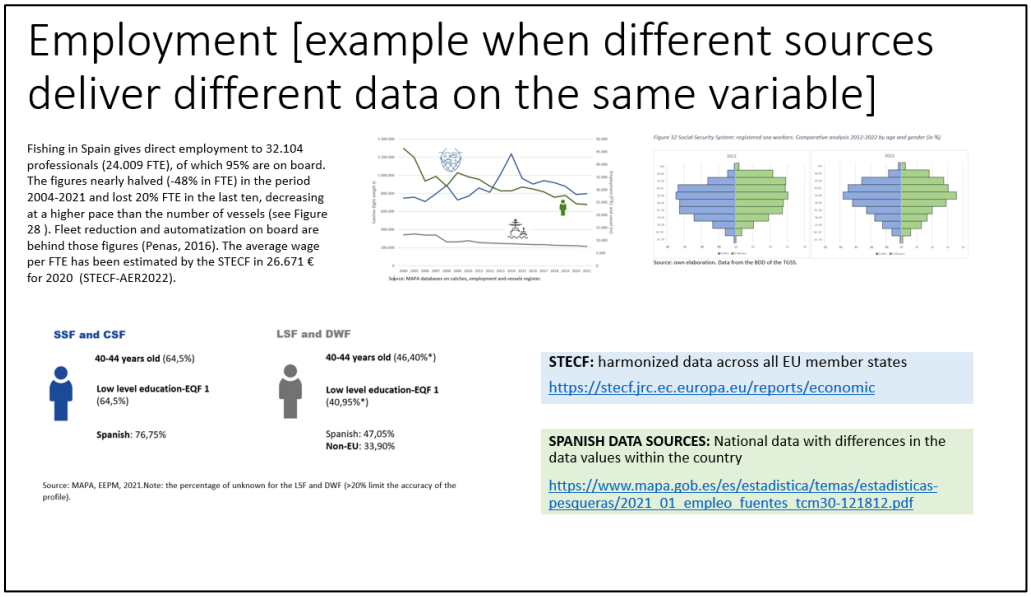


Figure 4 Example from the Spanish NFP when different sources deliver different data on the same variable.

2.5 Conclusions

Following the assessment of the NFPs, the EWG 23-17 provides possible solutions to the challenges mentioned above. All NFPs authors have expressed the need to have more time to reflect on the information gathered so far, to analyse what the data and information provide entails in the context of social aspects and to discuss this analysis with peers. Until now there has been no time to do this. EWG considers that it is of crucial importance to have such content-focused discussions on the national profiles, both for author(s)(-teams) writing the NFP as for the experts in the EWG discussing the NFPs. Moreover, having more time available would likely improve the social dimensions of the NFP as some social data is not as readily available as other types of data.

The EWG 23-17 concludes that after the first profile developed (The Netherlands) and the two follow-up profiles (Denmark and Spain), it has become clear that the initial drafting of the documents takes more time than was initially foreseen (for Denmark 4 days, for Spain 6 days). Nevertheless, the EWG recognizes that once the initial profiles are in place and developed, updating them will be less cumbersome.

Regarding the data issues, one suggestion could be to include personnel with access and understanding of different types of data in the team. Having different 'experts' or disciplines in the team - lead by a social scientist- can ease the process of data analysis and correct interpretation of the results. For example, some social scientists may have difficulties in understanding and extracting the relevant economic data from different data sources. It is also important that proper concepts with clear definitions are used in the discussions. Consequently, it is suggested that the NFP is prepared by a team of experts. The use of a team enables expertise to be pulled together as well and provides for an in-house internal review. The team leader should be a social scientist or expert with an extensive background in the use of social data/social perspectives in fisheries.

From having comparative National Fishing Profiles available it became clear how sub-headers and their content are treated differently, depending on interpretation of which information should be presented and on data sources available. Some data sources are available across EU countries (i.e. AER), some are more specific in certain regions (e.g. GFCM and ICES) and other data and information sources are only available in certain member states (e.g. accidents at sea database or rescues at sea).

An example of a difference in the data availability is that the social data collected under the data collection framework only occurs every three years on a mandatory basis, although some member states choose to collect the data annually (e.g. Bulgaria). Some differentiation herein will be unavoidable but making sure that where possible comparable sources used and time periods analysed, is important. The EWG 23-17 notes that authors of the new NFPs (Spain and Denmark) found other relevant data sources than used in the initial NFP (The Netherlands). Such relevant changes require some flexibility for the outline of NFPs. Therefore, developing a guidance document that can be updated over time would be useful.

Based on the gained experience and after reviewing the developed NFPs, the EWG 23-17 suggests a simplified structure of the format with a guidance document, rather than an elaborate list of sections and subsections. The guidance document should help prioritize which aspects of the template should be focused on. This will allow authors of national profiles to use sections within main topics that are relevant in their context (i.e. describing marine recreational fisheries (Spain) or not (The Netherlands), describing inland fisheries (The Netherlands) or not (Spain)). The guidance document should be seen as a living document that can be changed and updated after every new NFP, if required. With the new proposed structure of the NFP (both document and web-based) the clarity should improve, as should the simplicity of the structure and readability of the profile. Additionally, the use of infographics could improve this as well making it more user-friendly. Infographics could be used as complementary, explanatory visuals summarizing either quantitative data or highlighting key social messages and aspects (e.g., Spain case: fishing communities are struggling).

All the proposals are oriented to make the NFP an analytical tool to systematically integrate the social dimension into fisheries management and fisheries advice. To achieve that goal, substantive advances in data collection, standardization and harmonization are needed. EWG 23-17 proposes to prioritize developing a solid home and structure for the National Fisheries Profiles in a web-based environment. An online home will allow for linking to relevant data sources rather than extracting data from these sources and putting them in PDF based national profiles. This will save a lot of time. For instance, on the fleet and geography there is a lot of information available online, the national profile only helps in bringing the links together. On the web-based home a downloadable PDF can be provided, in which clickable links to those data sources can be provided. Once such a home is there, we can foresee also an incremental filling of national profiles by research teams. It should be noted that each development of a NFP would require funding. For smaller countries around 80h of work is needed, larger countries (in terms of size and diversity of the fleet, like Spain and France) would need approximately 100h.

With such an online home for the NFPs it also makes sense to allocate responsibility for hosting the site and maintaining the content to a dedicated body. EWG 23-17 discussed the possibility of an intersessional subgroup (ISS)[1] to be established which will focus on potential improvements and refinements in the collection and analysis of social data in EU fisheries (Intersession RCG Social). The reasoning behind having the ISS under the RCG ECON is that it should be pan-regional and RCG ECON is the only RCG in which all MS

(even land-locked countries)[6] are involved. Moreover, the RCG ECON (PGECON) already had a workshop (WS) on social data, which took place in Athens, Greece on 19-22 November 2018. Proposing such a subgroup is in line with the procedures of RCG ECON. Furthermore, having strong and clear links between the ECON and SOCIAL experts is important as the data collection is done together. Yet having a specific group with social science expertise is needed to guide the increased need for social data and its interpretation. This is particularly important as the data reported and assessed under the current data request do not always reach the end-users' needs. The EWG agreed that the first step should be to request from RCG ECON the establishment of an ISSG focused on assessing the state of social data variables. The hosting the site of the NFPs could be done by JRC / RCG secretariat and maintaining the content of the NFPs and covering the end-users' needs. Meeting one week per year to start with would be advised. This intersessional RCG group Social can accommodate the maintenance of the guidance document, and support the need to provide peer review on draft NFPs, discuss and validate the NFPs. In addition, it can arrange and secure data access for the consultants writing the NFPs, as this is a condition *sine qua non* for the elaboration of the NFP. The group would be also better suited to address the policy questions on the social dimension of the CFP, in light of the increasing demand on social advice for fisheries from the European (Commission, EU Parliament) and MS bodies.

Two final notes. First the NFP should go hand in hand with the community profiles to gain a deeper social-economic understanding of how and to what extent fisheries play a role in each MS and at different scales. Once a structure for NFPs is set up the EWG would like to discuss how to proceed with these. Second, EWG 23-17 notes that the most extensive systematic comparative analysis across the EU on fishing dependency developed a decade ago (JRC, 2012-2013) needs to be updated. There are immediate gains (the methodological approach is defined and can be improved with the knowledge advances and evidence delivered by WGSOCIAL, several data can be easily gathered) supporting NFPs, community profiles and the understanding of trends across Europe.

[6] https://www.fisheries-rcg.eu/intersessional-subgroups/

3 TOR 2: SELECTION OF SOCIAL INDICATORS

Building on the work of prior EWGs on Social Indicators (STECF PLEN 23-01, STECF PLEN 23-02, EWG 22-14 and 20-14) EWG 23-17 is requested to achieve progress in operationalising the social dimension.

EWG 22-14, under section 6.2 proposed a process of four consecutive stages:

1. A scoping exercise with policy-makers and advisory bodies (including ACs): what questions need to be answered? The policy relevance of the indicators will be stated.
2. Conceptual framework. The framework sets social indicators in the suit of fisheries indicators (ecological, environmental, economic), providing the linkage for integrative analysis and advice.
3. Conceptual validation, methodological and data considerations.
4. Selection. Grounded in the WGSOCIAL systematic review (FAO, 2022, EWG findings and TOR 1 and 2).

EWG 23-17 TOR 2 focusses on the scoping exercise of the (type) of questions the different stakeholder groups want to have answered through the process of collecting social data. In order to facilitate this process DGMARE has taken a first step of preparing a scoping paper from the perspective of DGMARE identifying the policy questions that need to be addressed by the social indicators.

EWG 23-17 is requested to evaluate these policy questions and indicate to what extent social indicators could be developed to answer these questions, taking into account existing data available through different Commission sources (DG MARE, DG ESTAT), as well as ways in which National Fisheries Profiles may complement the indicators. The data should be available per fleet segment in order to establish profiles and identify critical issues. As a first step, STECF is asked to focus on indicators concerning the catch sector, as in the AER report. Inclusion of the aquaculture and processing sectors would be envisaged at a later stage.

In this first scoping exercise of social data in relation to relevant policy questions the following considerations were taken into account:

- EWG 23-17 to reflect on the policy questions formulated, in terms of scope and concepts used and the extent to which social data could be gathered to formulate a relevant answer to the question.
- If possible, present possible social indicators that could assist in answering the policy questions.
- Formulate ways of obtaining relevant data to answer the policy question, noting
    - Scope of the questions
    - Availability of data
    - Level at which data need to be collected (fleet, métier, community, National)
    - Methodology of collecting the data (e.g. access to data base, interviews, group discussions, secondary literature);
- Based on the reflection of STECF on the scoping paper of DGMARE, DGMARE will take the process of scoping the policy questions for social data further by discussing the questions to be answered by social data to the wider stakeholder community.

Once the relevant set of social indicators and social data has been established in concert with the wider stakeholder community will the next steps in the process of further

developing the conceptual framework and, in the final analysis, choose the final set of indicators and data be implemented. As much as possible in the analysis of the scoping paper by DGMARE reference will be made to the wider conceptual framework.

The following 7 questions, with sub-questions were presented in the scoping paper. Below we will analyse each of the questions and sub-questions.

1. State of play:
    a. What is the current socio-economic situation of fishers (working conditions, safety, type & number of contracts over a year, well-being, training & skills, social position in society, income, employment type, age, gender, etc)?
    b. How does the situation compare to other sectors (e.g. how much more dangerous? How much more difficult)?
    c. What is the level of awareness of sustainability issues (environment, social, economic)?
    d. What are the working conditions of the non-EU workers onboard EU vessels fishing outside EU waters (equal treatment, equal training / skills, etc)?

2. Assessment of management measures:
    a. What impact do EU conservation measures[7] have on fishing communities[8] in terms of employment, working conditions and potential for social conflict?

3. Dependency:
    a. How vulnerable are fishers (wages, contracts, social coverage, pension, predictability of business environment, financial position, work safety, etc.)? On which aspects specifically?
    b. How adaptable are they to the changes they are facing (business structure, polyvalence including other non-fishing activities, training & skills, duration of residence (e.g., how long have they stayed in their current residence and therefore likeliness to accept moving), etc.), working rhythm?
    c. What impact does the employment of non-national fishers (EU) have on fishing communities?
    d. What impact does the employment of non-national fishers (non-EU) have on fishing communities?

4. Mobility:
    a. How many fishers have tried to work in the fleet of another EU country but couldn't? (link to mutual recognition, training)

5. Immaterial value:
    a. The Commission often hears and reads that "the social contribution of the fisheries sector outweighs its direct economic impact" – what is the

[7] Conservation measures are listed in Article 7 of the CFP Regulation.
[8] The definition of fishing communities is currently being discussed by STECF and ICES.

perceived historical and cultural importance of the fishing community in the EU by different categories of the population?

6. Generation renewal:
    a. How attractive is the profession for the younger generation (working - conditions and safety for men and women, training & skills, safety, income, social coverage, pension, working hours, time away from home, employment type (self-employed, full time, part time, etc.), level of professionalization, use of IT/technology, integration of environmental concerns, etc.)?
    b. How many fishers have "dropped" or discontinued the family business, and why (safety, income, hardship, family itself doesn't want them to continue)?
    c. What could make the profession more attractive?

7. Engagement & compliance:
    a. Which fishing communities are more engaged in representing their activity?
    b. How are they represented in local/national decision bodies?
    c. What role do the producer organisations and fishers' associations play?
    d. How do these organisations and associations perceive their role and impact in fisheries management decisions?
    e. How does the fishing community influence the level of compliance with rules?

3.1 Question 1: State of Play

a. What is the current socio-economic situation of fishers (working conditions, safety, type & number of contracts over a year, well-being, training & skills, social position in society, income, employment type, age, gender, etc)?
b. How does the situation compare to other sectors (e.g. how much more dangerous? How much more difficult)?
c. What is the level of awareness of sustainability issues (environment, social, economic)?
d. What are the working conditions of the non-EU workers onboard EU vessels fishing outside EU waters (equal treatment, equal training / skills, etc)?

3.1.1 What is the current socio-economic situation of fishers (working conditions, safety, type & number of contracts over a year, well-being, training & skills, social position in society, income, employment type, age, gender, etc)?

Several of these data are already collected via the Social and Economic report (DCF), such as: *age, gender, employment type and income*.

In our opinion, *working conditions* can be considered in different terms and interpreted from different perspectives, including vulnerability, such as (i) safety, (ii) type of contracting.

(i) *Safety* could be indicated by age of the vessel, data which can also be found in the DCF data reports (Annual economic report, Annual report on balance between fishing capacity and fishing opportunities). Fishing is often a difficult way to make a living. It is physically demanding and, in the US, has a fatality rate more than 30 times higher than the average across all occupations (Bureau of Labor Statistics, 2011; Holland, Abbott and Norman, 2020). In Spain, marine fishing has among the highest accident ratios, with higher gravity and mortality than others. The incidence ratio doubles the average of the total activities (INSST, 2021). Further indicators are: Fatality rate, number of injuries at work. The data is already collected and handled by the responsible national institution. The number of injuries at work is collected by the national health insurance fund and aggregated by the National Bureau of Statistics. Safety could also be measured by the use of specific tools and conditions of work (prevention of the risk of falling on the wet floor, cold and humid environment, handling heavy loads etc.) An extensive list of risk factors, which can be used as indicators, can be found at European guide for risk prevention in small fishing vessels (https://osha.europa.eu/en/legislation/guidelines/european-guide-risk-prevention-small-fishing-vessels, 19.10.2023). Some LDF also have specialized medical vessels in order to support health and safety of the employees onboard. Depending on the specific interest, they can be selected and collected via a survey. Getting a medical certificate on fitness is required by fishers on vessels by international law. Due to different legal schemes, some certificates are valid for 5 years, while the others require renewal on an annual basis. The time period between last medical exams/certificates could be another potential indicator of safety, especially for non-EU workers, which are not under the EU law. The data could be collected via a survey.

(ii) *Type of contracting* should describe the employment scheme and legal conditions under which the fishers are employed. The impact on working conditions can be indicated by different employment data, such as: differentiating between owner (self-employed) and crew, employment full time or part time for crew. These data are also part of the Annual economic report (DCF). Additionally, some member states already collect data on duration of contracts (permanent or fixed-term/temporary) and remuneration scheme (fixed, share of catch). Other indicators can be:

- A fixed salary as opposed to a share of the catch value can also be an indicator for working conditions such as job precariousness.

- Same goes for subcontracts vs. direct contracts with vessels as well as

- different types of social coverage.

- Pension: indicators can be entitlement to retirement (e.g. age, number of contracts) in comparison to other vocations in each MS.

However, due to different legal schemes of contracting in fisheries between MS, when assessing the working conditions, also the following should be considered:

- whether the MS signed up to ILO convention No. 188 (Working in fishing),

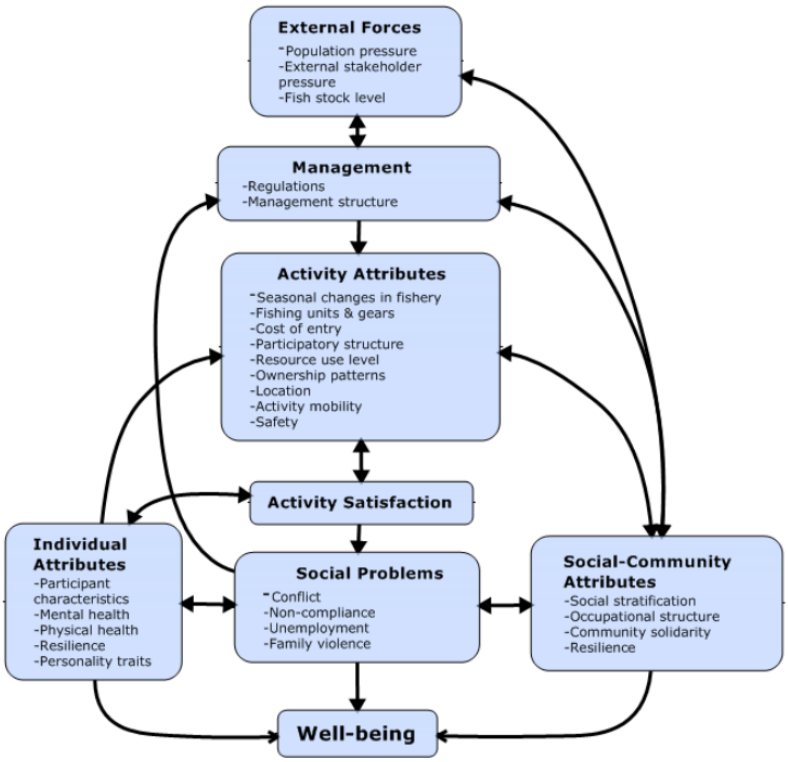
- trade union density rate, (if fishers unions exist in the MS)

- existence and types of collective agreements.

Well-being can be understood in very different dimensions, depending on the objective of the research question/topic. To look at well-being is not appropriate on a fleet level but should be considered at the individual and the community level. While the question of the Commission refers to the well-being of fishers, well-being is usually connected to fishing-communities (Fabinyi and Barclay, 2022). Since wellbeing is multidimensional (McGregor

et al., 2015; Stiglitz et al., 2018), fisheries contributions were considered as having material, subjective and relational dimensions. (Fabinyi and Barclay, 2022)

The Pollnac et al. (2006[2008]) model (below) illustrates the relationship between multiple attributes that directly or indirectly influence wellbeing at individual and community levels.



In terms of the well-being of fishers, we suggest looking at the (i) material/economic as well as the (ii) subjective and (iii) relational perspective.

(i) Material well-being can be discussed in terms of financial security (e.g. turnover in income, minimum wage (e.g. Belgium)) - data which are already collected in the Social and Economic data call. Material well-being can also mean a form of food security - especially in small scale fisheries, fishing can provide food security to fishing families. Other aspects of material well-being that could be obtained only via survey are Access to services and environmental quality. The important material aspect of well-being for workers onboard in long-distance fleets is the existence of agreements between owners and crew members which define working hours and daily or weekly rest, in order for fishers to spend some time at home with their families.

(ii) Subjective well-being can be translated e.g. into independence of fishers, their perceived freedom and their emotional connection to nature/sea.

Also, fisheries contributions to subjective wellbeing have effects on people's perceptions of their quality of life and the values and beliefs that shape their levels of satisfaction, such as whether they feel it is a good thing to be eating locally produced seafood or believe that fishers are operating in ways that sustain the marine environment. (Fabinyi and Barclay, 2021).

(iii) Relational aspects include whether fishers contribute to the development and maintenance of relationships that enable communities to achieve wellbeing, such as through donating to or volunteering in community activities like sports or festivals, or through business and political connections that may benefit communities. (Fabinyi and Barclay, 2021)

These can be described via the analysis of surveys or qualitative interviews. It can therefore be part of a qualitative community profile.

Training and Skill are understood as (i) level of education and (ii) vocational training.

(i) Level of school education is a direct indicator, already collected via the Social and economic data collection (DCF data call). However, for some countries the data on the level of education is only available for the level of education of the owners of fishing vessels.

(ii) Vocational (or job-relevant training): in order to be allowed to go fishing in MS, fishers need a certificate (qualification). While these certificates vary between MS and between part-time and full-time fishers, there is still a common ground in all MS, so there would be no need to ask if fishers have them or not. However, going beyond the basic qualification that all fishers need, we can use the number of certificates, frequencies of trainings and qualifications inside and outside of fishing as indicators to the qualification level of fishers, as well as their *capacity to adapt to change in fisheries* and e.g. get income from alternative livelihoods. This information could be added to surveys and complement the national fisheries profiles. To get an idea about the quality of the training, the interviews are needed. The possible source of data on training inside of fishing could be the EMFF data as the information on how many trainings, what the content, and how many fishers participated is available.

Social position in society can be operationalized as part of well-being, at the same time the notion stands for itself. Social position is defined as *social standing* and reflects whether the sector is able to attract the most talented workers in the community and signals the extent of wealth generation relative to local standards (Fishery Performance Indicators, Anderson et al, 2015). This metric is based on the social standing of owners/permit holders/captains or crew members within the community where they spend the majority of their time.

In the literature, fishers' social position has been obtained, using experts to judge the social standing based on a scale:

- 5: Among the most respected in the community, comparable with civic and religious leaders and professionals, such as doctors and lawyers;
- 4: Comparable to management and white collar jobs;
- 3: Comparable to skilled labour jobs;
- 2: Comparable to unskilled blue collar or service jobs;
- 1: Among the least respected, such as slaves or indentured servants

This scale can also be applied when asking regular community members.

Expert judgement as well as judgement of community members is best obtained by survey on a community level as part of a community profile. It should be stratified at small scale / large scale fisheries, owners / crew members.

3.1.2 How does the situation compare to other sectors (e.g. how much more dangerous? How much more difficult)?

The framing of the question towards working safety (see also 1a) instead of "more dangerous and more difficult" is a more applicable framing that can be translated into indicators.

3.1.3 What is the level of awareness of sustainability issues (environment, social, economic)?

To measure awareness of sustainability issues, the use indicators is not applicable. However, it is necessary to determine potential issues of sustainability as a baseline to evaluate the attitude of fishers towards them. *The knowledge of the level of awareness for sustainability issues does not give information about sustainable behaviour*. There can be barriers (structural, institutional, individual) that hinder awareness to be translated into sustainable behaviour.

Suggestions of issues, that awareness can be obtained on through surveys or qualitative data:

(i) *environmental sustainability issues*: the impact of the fishing practices on stock condition (overfishing), (dealing with/perception of) bycatch; IUU practices, impact on seafloors, MPAs, vulnerable species, climate change etc. Awareness on these issues could be obtained with surveys / interviews.

The level of awareness can be measured (i) by asking whether, during their studies, fishermen have taken specific courses relating to these issues, or if specific education on environmental issues has been provided by different institutions/actors (i.e. government, management bodies, NGOs). Level of awareness of fishers can also be described (ii) by the level of awareness of the community they live in (informal and formal norms), since it enhances the individual awareness. Measurement would also have to be done through surveys & interviews. (iii) Cooperation with scientific staff (e.g. observers) could be a topic of interest when considering the awareness of environmental sustainability issues. Depending on national practices (biological monitoring system taking observers onboard voluntary or obligatory), cooperation with scientific observers could be developed to an indicator for the awareness of environmental problems. At the same time, it could enhance awareness of environmental issues through the informal education and learning on environmental issues and building trust between the sector and science.

Then, from a more general point of view, whether fishers are aware of the issues and whether their fishing behaviour has changed as a result.

(ii) *economic sustainability issues*: profitability, investment in new / alternative gear and new technologies, entrepreneurship, impact of policy on entrepreneurship .

The awareness on these issues can also be obtained with surveys and interviews.

(iii) *social sustainability issue*: generative renewal; livelihood alternatives, food security (small scale fisheries); displacement from fishing grounds

The awareness on these issues can also be obtained with surveys and interviews.

Fishers´ awareness of these issues can only be collected through surveys / interviews. It is useful to know about awareness, but where awareness is supposed to lead to change of behaviour there is a need to identify barriers for this change first in order to deconstruct

them. So there is a need to find out under what circumstances awareness translates to behaviour change.

When there are no indicators available, it is suggested to do qualitative research on the issues and topics covered above, as they might be the basis for developing indicators at a later stage.

3.1.4 What are the working conditions of the non-EU workers on-board EU vessels fishing outside EU waters (equal treatment, equal training / skills, etc.)?

The indicators to evaluate working conditions, discussed at 1.a, are applicable both to EU and non-EU workers on-board, if they are hired under EU law.

In order to make inequalities visible, it is useful to compare the following values / indicators between non-EU and EU workers:

- national structure (multiculturality), language barriers
- income
- Occupational injury frequency rate (fatal and non-fatal)
- rotation of the crew
- voluntary agreement from the industries (that can cover workers that are not under EU regulations)

In these cases indicators for *"decent working conditions"* (Garcia Lozano et al, 2022) can also be applied:

- Employment in excessive working time - average annual working time per employed person
- precarious employment rate: indicated by e.g. subcontracts, duration (short-term/temporary/fixed-term)
- number of strikes of non-EU workers on-board EU-vessels, *trade union density rate*

When this data is not available to administrative staff, there is a need for a survey on individual level.

3.2 Question 2: Assessment of management measures

a. What impact do EU conservation measures[9] have on fishing communities[10] in terms of employment, working conditions and potential for social conflict?

Framing and interpretation of the question:

The EWG 23-17 consulted DG MARE on how best to interpret this question. As currently framed this question focusses on EU conservation measures and specifically links to Article 7 in the CFP (see Annex 2). The EWG 23-17 suggested to broaden the question to the more broad concept of all EU measures affecting fisheries operations. DG MARE answered that this change was ok, if specified to *EU measures taken under the CFP* (e.g. quotas, TM, capacity, protected areas, sensitive species) as the CFP defines DG MAREs remit.

EWG 23-17 understands this question as one asking for a social impact assessment (SIA) (with specific attention for fishing communities), which can be applied on a variety of management measures, including those of other policy frameworks (i.e. the MSFD or MSP and blue growth developments (i.e. ORE) under the authority of member states). However,

[9] Conservation measures are listed in Article 7 of the CFP Regulation.
[10] The definition of fishing communities is currently being discussed by STECF and ICES.

to provide a base for which to answer the question above, the following section will focus on *EU measures taken under the CFP*. Once a system for SIA has been set up in the context of EU measures, it can also be used for understanding impact of other measures or measures taken under other policies than the CFP.

In order to be able to answer the question on impact of measures under the CFP on fishing communities, it is necessary to first identify the relevant fleets or fleet segments for which certain management measures apply. Only then, with a *direct link* between measures and fishing actors, can the *indirect link* be established between measures and fishing communities.

Studying the impact of *specific* measures prove to be difficult and attributing a causal relationship between a specific measure and the resulting impact is often impossible. Measures and their impacts are embedded in complex socio-ecological systems with multiple factors impacting the fleets simultaneously, as well as feedback loops taking place (Ostrom, 2009). Behaviour of fishers (resulting in different outcomes and impact of fishing) can already be influenced by measures being announced (i.e. the marine action plan suggesting a ban on bottom trawling). And in interviews with fishers, to understand the impact of certain measures, fishers can in their responses refer to a suite of measures that cumulatively have impacted their fishery (i.e. an MPA closure and the development of an Offshore Renewable Energy site (ORE). Thus, these are practical caveats that need to be considered when doing a social impact assessment of certain measures.

Definitions and methods

Before engaging in any sort of assessment it is essential to have definitions in place. Impact is understood as *social* impact (as it is about impact *to* fishing communities). Any social impact in this context will include economic impacts as well, as there will be (in)direct economic consequences to the fishing communities (i.e. of auctions and auxiliary activities in those communities).

In the context of the question on social impacts, *fishing communities* are understood to be geographical places. If we want to understand how impact of measures on fleets subsequently impacts communities, a link between fleets and communities is required. Creating such a link is currently worked on in ICES (WGSOCIAL for the methodology and Ecosystem Overviews as advice products[11]) and taken up in for instance in the Seawise project[12]. In this method the main landing ports per fleet segment have been used as a proxy to identify and determine the different fishing communities. There are, however, two limitations to this approach:

1) By using landing ports as a proxy, the fishing communities are linked to fleets via landings. However, links can also be established between fishing communities and

[11] See for instance the North Sea Ecosystem overview: https://ices-library.figshare.com/articles/report/Greater_North_Sea_ecoregion_Ecosystem_Overview/21731912

[12] www.seawiseproject.org

fleets via the home towns of fishers working on that fleet. As the STECF 22-14 report noted, landing ports is only one dimension of a fishing community and fishing communities could also include other aspects such as the port of registration, historical socio-cultural significance or the presence of other activities linked to fisheries.

2) This approach is based on VMS and logbook data, which does not cover all small scale fleets. Therefore if management measures are to be assessed for their impact on fishing communities which mainly affect small scale fisheries, this approach is not useful.

Depending on the impact to be assessed and depending on the context of ways to establish links between fleets and communities, which may differ between countries, a different proxy or definition might be required. It could be that for understanding the social impact of a certain conservation measure it is more useful to use another proxy for fishing communities then port of landing, for instance home port, the question is whether we would have a unified approach to identify these communities. It is advisable that we do seek such unified approaches that work in all EU MS.

Answering the question

Social impacts of EU measures under the CFP on fleet segments and subsequently on fishing communities can be many. EWG 23-17 made use of the guidance on social impact assessment developed in the USA which discusses different potential social impacts in relation to fisheries management changes (see Table 1 below) (Clay, Colburn 2021). Impacts can affect practices of the fleet at sea (e.g. relocation of fishing grounds and displacement of fishing effort; changes of discarding practices, which can result in gear conflicts, changes in CPUE or in an increase/decrease of crowding), fishers (e.g. job satisfaction) or communities (e.g. changes in the economic and social structures of communities) (Clay, Colburn 2020). The table below (Table 1) provides examples of social impacts that fisheries management changes may produce.

Table 1 Examples of social impacts that fisheries management changes may produce

Table 1. Examples of social impacts that fisheries management changes may produce

Social impact	Closed areas	Gear changes	Days at Sea	Size Limits	Catch limits	Trip Limits	Limited Access	Catch shares
Relocation of fishing grounds/ displacement of fishing effort	X	X	X		X			X
Increase/decrease crowding	X	X	X		X		X	X
Increase/decrease gear conflicts	X	X	X		X			X
Increase/decrease in CPUE	X	X			X		X	X
Increase/decrease in food security	X			X		X		X
Increased cost to participate in fishery	X	X			X			X
Change to family and community life	X	X	X				X	X
Increased/decreased safety at sea	X	X				X		X
Relocation of fishermen and processing facilities	X							X
Change economic and social structure of community						X	X	X
Change in job/angler satisfaction	X	X	X	X	X	X	X	X
Change in composition and character of fleet							X	X

Change in composition of fishing support services	X	X						X
Opportunity to expand fishing efforts		X					X	X
Pressure to keep up with competition		X						
Ability to preserve way of life		X		X	X		X	X
Increased criticism of government or perception of overbearing government	X	X	X	X	X	X	X	X
Changes in occupational opportunities/consolidation			X				X	X
Changes in discarding of marketable fish		X		X	X	X		X
Increased/decreased fishing season					X			X
Change in relationship between fishermen and the supply chain					X	X		X

Source: Colburn and Clay SIA 2020

Each of the impacts found in the table above can be described qualitatively or measured quantitatively if indicators are available. It is beyond the scope of this report to assess each of these potential impacts and describe potential indicators and/ or methods to study the impact qualitatively. Instead, EWG 23-17 worked with three concepts that were central in the question of the commission in the table below: working conditions, employment and social conflict, and grouped them per potential unit of analysis: fleet, community or sector. In addition, potential indicators are listed that could serve as an inspiration/ reference point linked to potential data sources and types of data. Most of the indicators listed below can serve as starting point for understanding the social impact but the data is not always readily available. Although some data can be found in the AER (e.g. number of crew members) or through national data sources (e.g. court cases), the majority of indicators requires specific (qualitative) research through, for example, interviews and surveys.

During the assessment of relevant indicators and/ or data sources, several other potentially useful and important concepts were discussed. These include (but this is not exhaustive): economic impact (e.g. profits and revenue may change; prices of fish may change as a result of reduced landings due to conservation measures); the ability and/ or willingness to adopt the conservation measures (i.e. compliance and acceptance of the measures); understanding to what extent Local Ecological Knowledge was used in the creation of such measures; and the ability to preserve the way of life after such conservation measures have been introduced.

Table 2 Possible indicators, units of analyses, concepts and data sources /types of data that could help understand the social impact of EU measures on the fleet and fishing communities.

Concepts provided by DG MARE	Unit of analysis	Possible indicator	Data sources/ types of data
Working conditions	fleet	*# hours rest/ sleep	Qualitative research (surveys, interviews)

		*changes to family life, household dynamics *# crew needed *safety at sea * job satisfaction *pressure to keep up with competition * changes in fishing season *# of crew onboard fishing vessels	
Employment	fleet	*# fishers (crew members & vessel owners) *# family companies *origin of fishers (foreign or from community) *duration of employment/ *years of experience *contract type * age groups	AER Qualitative research (surveys, interviews)
	communities	*# fishers in the community *origin of fishers (foreign or from community), *alternative income opportunities for fishers * change to community life *relocation of fishermen / processing facilities	AER Qualitative research (surveys, interviews)
	National fishing sector	*(additional) education *ancillary industry (# companies, profit, # employees) *change in relationship between fishers and supply chain	AER National data bases Qualitative research (surveys, interviews)
Social conflict	between fleets	*gear conflicts *Records of disputes or tensions between various fishing fleets (e.g. conflicts over fishing territory	MS expert knowledge Qualitative research (surveys, interviews)

	between ship owners & crew members	*records of legal disputes/ complaints filed by crew members against vessel owners	National data bases Qualitative research (surveys, interviews)
	in/ between communities	*records of legal disputes/ complaints	Qualitative research (surveys, interviews)
	between the fishing industry and other sectors (using the sea)	*records of legal disputes/ complaints *# court cases	National data bases Qualitative research (surveys, interviews)
	fishers and government	*# court cases *# demonstrations (protests) *(lack of) participation in decision-making processes	National data bases Qualitative research (surveys, interviews)
	between countries	*e.g. ban on pulse fishing, bottom-trawling, MSP plans per country *court cases *call for infringement procedures *lack of consensus/ agreements	National data bases MS expert knowledge Qualitative research (surveys, interviews) Regionalisation of TM, if MS cannot agree they refer back to the commission

Conclusion

The jump from 'conservation measure' to 'fishing community', which was proposed in the question, was found to be quite large. As such, the 'fleet segments' were introduced as a unit of analysis as well, allowing for a link between EU measures and fishing communities. Different aspects of the question can be answered with different units of analyses, such as: fishing communities (understood as being place-based), the fleet, the national fishing sector and the 'national level' more broadly. Analyses can also be made by looking at the relation between fleets, between owners and crew members, in or between communities, between sectors, between fishers and governments, and between countries. Examples are provided in Table 2.

Understanding what the social impacts of EU measures under the CFP are on fleet segments and fishing communities not only include those on working opportunities, employment and the potential of social conflicts, but also require looking at other concepts such as: economic impact (e.g. profits and revenue may change; prices of fish may change as a result of reduced landings due to conservation measures); the ability and/ or willingness to adopt the conservation measures (i.e. compliance and acceptance of the measures); understanding to what extent Local Ecological/ Experiential Knowledge was used in the creation of such measures; and the ability to preserve the way of life after such conservation measures have been introduced. This is not an exhaustive list and many other indicators or methods in which social impact could be measured, exist.

Broadening the scope of the question could ensure a more in-depth understanding of the social impacts that EU measures have on the fleet and fishing communities. By focusing only on EU measures under the CFP (i.e. quotas, TM, capacity, protected areas, sensitive species), other changes in policy and management measures may be overlooked although they can have a substantive impact. The initial phrasing of the question suggested a false dichotomy between fishing and conservation. Other measures with substantial impacts include, for instance, the blue growth developments (e.g. Offshore Renewable Energy (ORE) developments) and measures under the MSFD that impact the available (marine) space for fishers. Lastly, there are impacts of measures that have *not* been implemented (yet) but have been communicated to the public that can have a large impact on the fleets and fishing communities (e.g. the Marine Action Plan in which a reduction of bottom trawling was stated). The EWG 23-17 would like to emphasise that even such measures may require a careful consideration of potential social impacts.

With any change in policy it is imperative to consider the social impacts. In order to arrive at such a social impact assessment, (social) objectives and targets are needed that can be evaluated, as well as baseline data against which the measure will be bench marked. As such, the EWG 23-17 suggests the collection of systematic qualitative data and broadening the scope of the question to include the assessment of other EU measures as the SIA framework (Colburn and Clay, 2020) discussed above would be a useful tool for that as well.

3.3 Question 3: Dependency

a. How vulnerable are fishers (wages, contracts, social coverage, pension, predictability of business environment, financial position, work safety, etc.)? On which aspects specifically?
b. How adaptable are they to the changes they are facing (business structure, polyvalence including other non-fishing activities, training & skills, duration of residence (e.g., how long have they stayed in their current residence and therefore likeliness to accept moving), etc.), working rhythm?
c. What impact does the employment of non-national fishers (EU) have on fishing communities?
d. What impact does the employment of non-national fishers (non-EU) have on fishing communities?

3.3.1 How vulnerable are fishers (wages, contracts, social coverage, pension, predictability of business environment, financial position, work safety, etc.)? On which aspects specifically?

Vulnerability has multiple definitions, depending on the context (e.g. climate change, natural hazards, poverty and limited food security). Vulnerability research is often used to identify the characteristics of a community (or population) that influence the social burden of risk and "susceptibility of a given population, system, or place to harm from exposure to the hazard…" (Cutter et al., 2009:2). Furthermore, social vulnerability is centred in both demographic and socioeconomic characteristics of local populations that increase or attenuate the impacts of hazard events (Cutter et al., 2009).

Alternatively, this question can be framed in the context of reliance, whereas a high reliance implies a higher vulnerability to changing circumstances. EWG 18-15 defines reliance as: relating to the extent to which the social and economic circumstances of actors, businesses, sectors and communities rely on fisheries – the significance of fisheries related activities is determined by the degree to which one relies on these activities for income, status and culture

EWG 22-14 suggested the development of a vulnerability index that builds on the one used by NOAA which could answer the question on how vulnerable fishers and their communities are. The questioned items (i.e. wages, contracts) can be assigned to variables of the index, as indicated below. For the items addressed in the question please also refer to question 1a – indicators suggested there can also be consulted to discuss vulnerability. However, here we refer to a vulnerability index that has been applied and tested before (Jepson & Colburn 2013).

Vulnerability index usually refers to communities. For this index to work, we define a fishing community as a community of place. It is suggested the vulnerability index to be composed of (Jepson & Colburn 2013):

Personal disruption: represents factors that disrupt a community member's ability to respond to change because of personal circumstances affecting family life or educational levels or propensity to be affected by poverty. A high rank indicates more personal disruption and a more vulnerable population.

It is operationalized as: Percentage unemployed, Crime index, Percentage of population with no diploma, Percentage of population in poverty. Data can be obtained via national statistics.

Population composition: shows the presence of populations who are traditionally considered more vulnerable (e.g. women, elderly, migrants/foreign workers) due to circumstances often associated with low incomes and access to fewer resources. A high rank indicates a more vulnerable population.

It is operationalized as: Percentage immigrant population, Percentage female single headed households, Percentage population 0-5 years. Data can be obtained via NFP (or census).

Poverty: commonly used indicator of vulnerable populations. A high rank indicates a high rate of poverty and a more vulnerable population. This indicator can include wages and financial position.

It is operationalized as: Percentage receiving assistance, Percentage of families below poverty level, Percentage over 65 in poverty, Percentage under 18 in poverty. Data can be obtained aggregated for country level (census).

Labour force: characterizes the strength and stability of the labour force and employment opportunities that may exist. A high rank means likely fewer employment opportunities and a more vulnerable population.

This is operationalized as percentage females employed, Percentage population in the labour force, Percentage of self-employed workers, Percentage populations receiving social security benefits. Data is partially covered by census (number of people capable of working, employment / unemployment; education level).

Housing characteristics: is a measure of infrastructure vulnerability and includes factors that indicate housing that may be vulnerable to coastal hazards. A high rank means a more vulnerable infrastructure and a more vulnerable population. On the other hand, the opposite interpretation might be that more affordable housing could mean less vulnerability for some populations.

This is operationalized as: median rent in Euros, Median mortgage in Euros, Median number of rooms. Data can be obtained via national statistics.

Social network: is a measure of the social structure of the community (place-based; community of practice or else) that indicates integration. A higher rank means a less vulnerable society.

This translates to: Number of fisheries organizations (any time and legal entity), Number of fisheries Local Action Groups (FLAGs), Percentage of people affiliated/engaged in community groups. Concerning the data, the number of fisheries organizations is in the NFP; Number of Flags is publicly available at FLAG network level; percentage of people engaged in community has to be found out in a survey (see question 7).

Support to fishing communities: is a measure of public and community support and aims to characterize the level of institutionalized support specific to the fishing community (place-based; community of practice, or else). A higher rank means a less vulnerable fishing community. This is operationalized as: Percentage of public departments/services focused [only] on fisheries, Percentage of NGOs with fisheries programs, Percentage of other civic society organizations with fisheries programs. Data can be obtained via (web-based) research.

Professional mobility potential: is a measure of the capability to switch jobs within a community. A higher rank means a less vulnerable population. This is operationalized as Level of education, Percentage of companies outside the fisheries sector in the area

Data is available at national statistics (census).

Public services and facilities: is a measure of the availability of essential services for the functioning of a community. It also aims to capture the degree of connection of isolation. A higher rank means a less vulnerable community. This operationalizes as: Number of schools, banks, etc., Facilities within a given distance: train, bus, etc.

Data can be obtained via research on public available data.

Additionally, it is sensible to cover the following issue by the index:

Access to resources: is a measure of the access to natural resources, which can be restricted by management, technical aspects, social aspects and ecological prerequisites (addresses also predictability of business environment)

- Management:
    - TAC (high / low) – publicly available
    - duration of quota (the fewer years, the less predictability the fishing business is, leading to possible higher vulnerability) – publicly available
    - access to fishing grounds (e.g. distance from port to fishing grounds; potential fishing grounds not used by other users) - via AIS data for large scale vessels (>12m), survey for small scale vessels

- Technical aspects:
    - engine power – DCF
    - fuel price – publicly available
    - fuel consumption – DCF

- Social aspects:
    - spatial conflicts with other users – to obtain via survey or qualitative interview; impact
    - percentage of potentially accessible areas – marine spatial planning maps (for MS)

- ecological prerequisite:
    - condition of stock – for monitored species available
    - (extreme) weather conditions (climate change) – (expert) survey or literature review on how changing weather conditions has changed fishing behaviour

3.3.2 How adaptable are they to the changes they are facing (business structure, polyvalence including other non-fishing activities, training & skills, duration of residence (e.g., how long have they stayed in their current residence and therefore likeliness to accept moving), etc.), working rhythm?

The description of the state of play (see question 1a) covers already indicators on training and skills. The data on training and skills might imply one's (dis)ability to change the profession in case of sudden changes or shocks (policy change, disaster, environmental issues), but also should be interpreted together with the business and community structure (job opportunities) and individual likeliness to accept moving.

Polyvalence in terms of (i) fishing activities and (ii) non-fishing activities: (i) polyvalence in fishing activities is understood as a) skilfulness needed for obtaining fishing business, such as the flexibility and ability to change gears, mending nets, repairing vessels, accounting. At the same time the individual b) willingness to act polyvalent needs to be taken into account (Steins et al. 2023). (ii) Polyvalence in non-fishing activities can be indicated by different training and skills (see question 1a), as well as by the existence of outside jobs which do not require extra training (e.g. facility manager). While some data on training can be obtained during a data call (cf. question 1a), additional data need to be obtained by conducting surveys and interviews.

When analysing the adaptability of fishers, geographic criteria should be taken into account, as the remoteness and marginality of certain areas, together with the scarcity of natural resources reduce the capacity for adaptation. It would be appropriate to distinguish mainland and islands, due to the limited ability to change the economic structure has always distinguished the island economy from the economy of mainland regions (Starc, 1992). Further reference can be the vulnerability index as discussed above.

As place attachment is also a driver of adaptation in coastal communities (Amundsen, 2013), qualitative data based on the fishing community is considered as relevant to assess the adaptability of fishers (to be obtained via community profiles).

The access to resources, as described under question 3a (dependent on management, technical aspects, social aspects and ecological aspects) need also to be taken into account here.

Last but not least, adaptability of fishers can depend on their agency: their individual capacity to freely make choices (Brown and Westaway, 2011). We refer to an existing framework on agency (Manlosa, 2022), suggesting four multi-scale pillars: (i) preconditions, (ii) processes, (iii) power, and (iv) possibilities.

(i) Preconditions refer to the capital assets and resources (CARs) such as: economic, human, natural, physical, political, and social CARs (van Dijk, 2011).

(ii) Processes refer to social and ecological feedbacks and dynamics in livelihoods.

(iii) Power describes the social and political frames in which livelihoods are embedded.

(iv) (Future) possibilities are considered as an outcome that results from the interactions of preconditions, processes, and power (Manlosa, 2022).

Preconditions (capital, assets and resources) exemplified transferred to fisheries (Braun 2022):

Sub-Category
Family tradition in fishing
Membership within a cooperative
Apprenticeship or work experience outside of fishing
Physical capital
Available quota
Formal knowledge
Traditional knowledge
Family supporting the business
Secondary network
Experiential knowledge
Mode of employment

Alternative framework for Adaptability: response of fishers to generic yet anticipated change events is determined by four key characteristics: (1) perception of risk associated with change; (2) perception of the ability to plan, learn, and reorganize; (3) perception of the ability to cope; and (4) level of interest in change (Marshall & Marshall, 2007)

The described frameworks for assessing adaptability of the fishers on community or individual level could result in valuable outcomes. The frameworks can only be filled with qualitative data.

3.3.3 What impact does the employment of non-national fishers (EU) have on fishing communities?

3.3.4 What impact does the employment of non-national fishers (non-EU) have on fishing communities? > answered together

We understand a fishing community as a community of place here. The target population are foreign workers living in a fishing community, however there are also non-local workers who are not allowed to leave the vessel. They will rather have an impact on a community of practice than a community of place. In this context, it has to be taken into account that some non-local workers are not allowed to leave the vessel and thus the impact on communities is not relevant.

Data on nationality of the crew and owners has already been collected through socio-economic data collection (DCF). Although some of the data collected through the socio-economic data collection (age, gender, type of contract and remuneration scheme - for some countries) might be indicative, the available data does not reflect the impact of the

employment of the foreign workers on the fishing communities (DCF data is based on fleet segments).

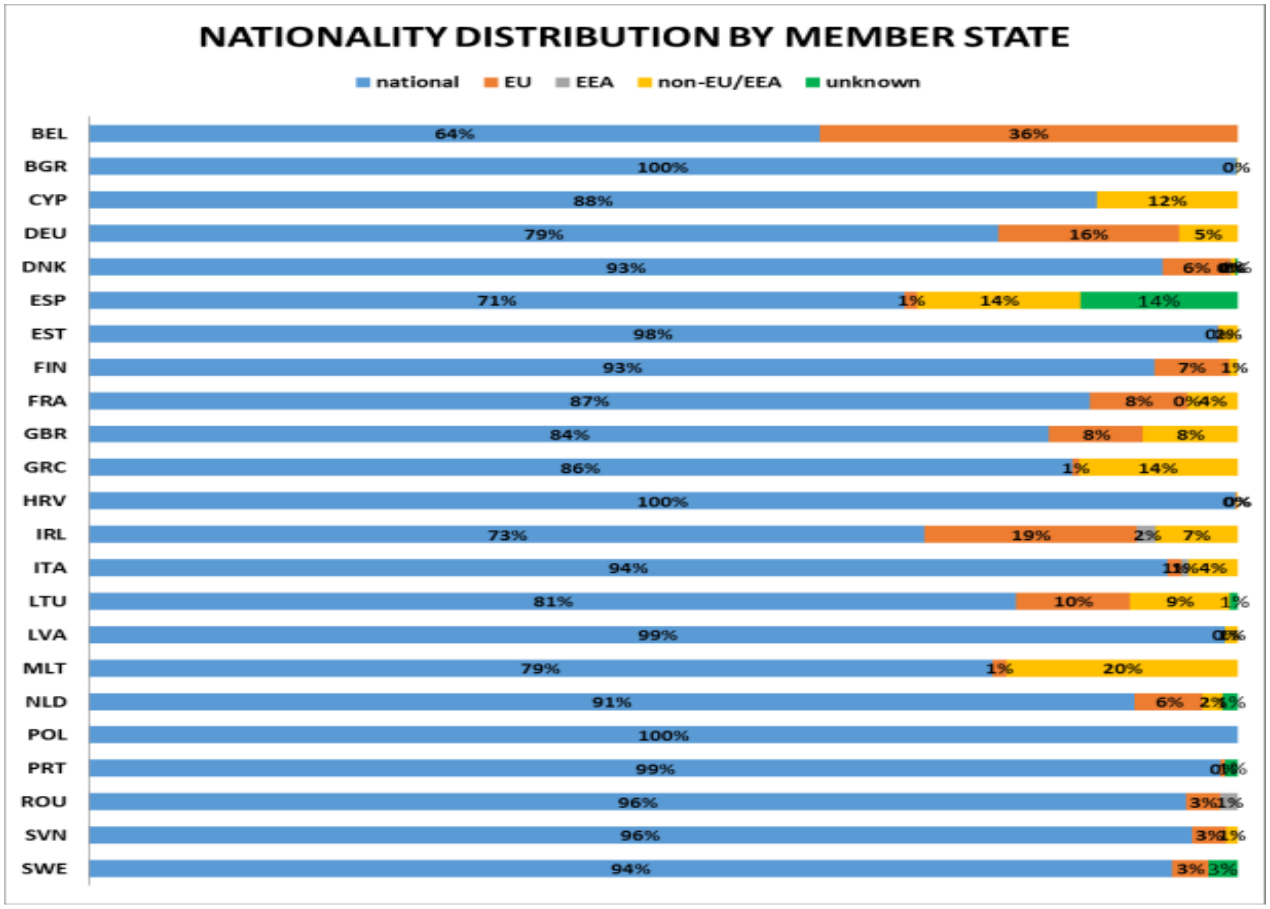
Deeper insight on impact might require both a quantitative and qualitative approach based on fishing communities, and should consider where and how foreign workers live, how many of them live and work in a certain community (compared to permanent residents), for how long, how integrated they are and how the employment of the non-national fishers affected the economic and socio-cultural structure of the fishing community. Hereby, the characteristics of fishing communities should be observed, potentially through the indicators: rate of unemployment in the community, proportion of non-resident employment, duration of stay (including families´ stays), marriage between locals and non-locals, perception of integration / racism, public discourse on foreigners in community, political climate in community, change in cityscape/landscape. Collecting these data requires conducting surveys and interviews both with foreign workers and permanent local residents on a community level. However, expertise on integration, racism and well-being of non-locals is not the main expertise of this expert group.

3.4 Question 4: Mobility

3.4.1 How many fishers have tried to work in the fleet of another EU country but couldn't? (link to mutual recognition, training)

The current formulation of the question renders it not possible to answer due to the lack of such data at EU and MS levels. Since 2019, it is possible to assess the number of nationals, EU and EEA, non-EU-EEA people employed in the European Fishing fleet. The information is published in the report on social data prepared from STECF (2019). The data related to this question is gathered by all Member States under the DCF framework. The data shows that out of the 147,414 people employed by the European fishing fleet 85.9% were national, 7.7% were non-EU/EEAs, 3% were from other EU MS and 0.1% were from EEA countries, while the origin of 3.3% of them is unknown.

The following table shows employment by nationality distribution by country.



Source: STECF, Social data in the EU fisheries sector (STECF-19-03)

This table shows that the proportion of nationals working in different member states fleets varies significantly. For example, 27.3% of those employed in the Irish fleet were non-Irish nationals and 36.3% of those employed in the Belgian fleet were non-Belgian nationals. In contrast 94% of the Italian workforce were Italian and 99% of the Portuguese workers were nationals. All the people employed in the Bulgarian fleet were Bulgarian nationals except for 2 individuals (0.1%) who were from non-EU/EEA nations.

In terms of nationality, the distribution between fleets shows a clear difference between Small Coastal Scale Fleet (SCSF), Large Scale Fleet (LSF) and Distant Water Fleet (DWF). SCSF fleet is dominated by national labour as the non-nationals are representing only 5% of the total people employed in this sector. LSF employs 20 % of no national and Distant Water Fleet (DWF) employs 56% of foreigners. More information on that issue can be find in the national profile in this report.

3.4.2 Spain

Spain requires specific training to become a fisher. To be able to work as part of the vessel crew, both in the engine room and on deck, a person needs to get a fisher certificate and a mandatory basic training in security. The regulatory framework also sets minimum requirements relating to maritime health and safety (see RD 1216/1997). The minimum requirement is that every person in command of a vessel shall receive specific training on health and safety prevention and measures in case of accidents in light of the high hazards of the activity.

Spain is a member of several international conventions on training (i.e. STCW-F 1995 and SFV Protocol 93). Assessing the training system for the EMFAF pinpointed at some shortcomings. In particular, the focus on the official certification and operational activities on board leaves caveats in business management, new technologies and the environment. Digital capacitation is also aggravated by the advanced average age of fishers, which hampers the otherwise potential of using on-line platforms to combine daily work with capacitation (FEMPA, 2021). A Register of Fishing Sector professionals is available, as well as data bases of Spanish professionals in third countries (FEMPA, 2021). On the other hand, foreign fishers get their qualifications validated based on the signature of the STCW-F treaty or the existence of bilateral agreements. An additional test on Spanish maritime fisheries regulation is requested.

The national reference centre for training is the *Instituto Politécnico Marítimo Pesquero del Atlántico de Vigo* (R.D. 869/2015), part of the Institute Social de la Marina (Social Maritime Institute). In addition, there are 21 public training centres distributed in 9 regions; private centres can be homologated to provide training on some qualifications, including fishers (FEMPA, 2021).

3.4.3 France

In France, the income of all people (national and non-nationals) working on-board of fishing vessels is based on shares, fix salary or a combination of both. A collective convention is defining all these conditions after a negotiation and signature by social partners. The last convention was signed in 2016. The collective convention in fisheries applies to all persons working on French fishing vessels owned by French citizens, whether they are national, EU citizens or foreigners. All fishers are contributing to the social security system of fishers called ENIM.

In 2017, more than 85% (n=11,468) of the French fishers' were French citizens, 8% (n=1 109) were national of other EU Member States, 4% (n=573) were not EU/EEA and the nationality of 2% was unknown. The most significant aspect is the presence of foreigners is in the NAO supra region, with 14% (n=1062) of crew members on-board, coming from other EU countries such as Spain, Portugal and Poland. Also, in terms of regions, 12% of the total of non-Europeans (n=67) are found in the MBS supra region and are working mainly on purse-seines and trawlers, and come from North African French speaking countries. 26% of Non-European (n=149) are found in NAO supra region and they are mainly working on fleet segments as DTS and DFN. 62% of the Non-European (n=357) are found in OFR supra region. The low number of non-European crew in France may be linked to the fact that the remuneration and social security costs are the same for national, Europeans and non-European citizens, so vessel owners don't seek cheap labour from abroad.

Regarding training, being a fisher requires initial training and lifelong learning. Different diplomas are available and are awarded by different public or private schools. French nationals, citizens of EU Member States and EEA citizens can be employed in French fishing if they possess the required qualifications and diplomas. A training in security at sea is mandatory for all. A decision of the French prime minister dated of 17 May 2022 has established a list of States whose diplomas are recognized by France in conformity with the STCW-F convention.

Citizens of EU Member States, of EEA or the Swiss Confederation are authorized to become skippers, officers and crew on board of French fishing vessels. For skippers and officers replacing the skipper, access to these functions requires a knowledge of French language and legal concepts enabling the skipper to keep on-board documents and exercise the

prerogatives of public authorities assigned to him. A decree of the Council of the State specifies the conditions of application of this last provision taken after consultation with the representative organizations of shipowners, seafarers and fishers concerned. Languages abilities are also required for crewmembers.

Language abilities are necessary not only to fill all the administrative documents related to vessel activity but also in case of emergency (accident) because, as experience on board has shown, people on-board often only understand their mother tongue.

Hence, in conclusion, although the question of how many fishers have tried to work in the fleet of another EU country but could not cannot be answered, from the number of people employed in the fleets having a non-national back ground it shows that mobility between countries is possible.

3.5 Question 5: Immaterial value

a. The Commission often hears and reads that "the social contribution of the fisheries sector outweighs its direct economic impact" – what is the perceived historical and cultural importance of the fishing community in the EU by different categories of the population?

Interpretation of the question

From the above question, EWG 23-17 gathers that the Commission would like to have a better understanding of the social contribution of fisheries to society, beyond its economic contribution. Where the latter is quite well studied and described in the Annual Economic Reports (AER) (see https://stecf.jrc.ec.europa.eu/reports/economic), the former is not – or at least not beyond project and/or case study level (i.e., PERICLES project[13], Kraan et al., 2023 for the Netherlands).

Whether or not that contribution outweighs the economic one is difficult to substantiate as these contributions are measured in different ways. Whereas the economic contribution can be quantified with various economic indicators (e.g. gross value added, which estimates the contribution of fisheries to the GDP), the social contribution is less easily expressed in monetary terms. Nevertheless, in social science research, it is possible to map out how the social value of fisheries can be measured and/or described, including looking at its historical importance in different places (communities, member states, and regions) as well as describing the different cultural aspects of fishing such as (but not limited to) the (im)material value of fisheries cultural heritage.

The Commission suggests studying this topic by researching the perception of different categories of the population. EWG 23-17 proposes, considering the knowledge gap in this domain, to first directly study what the social contribution of the fisheries sector is rather than asking how people *perceive* the contribution to be. By first identifying what the baseline of social contribution is, negative unintended consequences may be mitigated with policy changes in the future. In addition, the operationalization of the concept of 'perception' would first require outlining the potential social contributions of fisheries to society, which can then be followed by developing a method to measure people's perception (e.g. through the use of a survey, Q-sort factor analysis, interviews).

[13] www.pericles.eu

Similarly, as far as the last part of the question regarding "... different categories of the population", EWG 23-17 considers this to be a rather generic statement as there are multiple ways to categorize population (e.g. by gender, education, age, occupation). Therefore, EWG 23-17 suggests that the "perceived historical and cultural importance of the fishing community in the EU by different categories of the population" is something that needs further clarification. At the same time, priority should be given to outlining the social contributions of fisheries to society in general, as is already emphasized in the previous paragraph.

How can the social contribution of fisheries to society be studied?

The social contribution of fisheries to society is multifaceted and multi-scaler. Multi-scaler implies that fishing is not only a job (of a person), but it is an important aspect of the identity of fishers and their families. Fishing is often locally and historically rooted and embedded in all sorts of social relations and local networks (Palsson, 1995; Allison and Ellis, 2001). Therefore, the social contribution of fisheries needs to include studying the importance of fishing for the people *directly and indirectly* involved in the activity, as well as for involved *communities*, *coastal regions,* and *society* at large. It is also multifaceted as it can be linked to the history of fishing, to its contribution to culture (both material as well as immaterial), but also to food security, to the economy -including the provision of jobs and livelihoods-, and to the social well-being of fishers and communities. Voyer et al. (2016) developed a framework for an integrated socioeconomic evaluation of fishing by looking at the concept of well-being (see table below). Using well-being as a concept 'allows for a broad conception of "value" to communities' (p13) and builds on social, economic, and biological data that can be used in valuation strategies. The relational aspect of well-being allows for understanding the interactions of commercial fishing with other sectors, such as the service and the processing sector.

Moreover, the well-being framework allows for both objective and subjective measures of well-being, which is important (Voyer et al., 2016: 13-14) for the holistic understanding of an individual's well-being, taking into consideration that this cannot solely be derived from objective metrics. Therefore, by including subjective measures, the framework also captures the intangible aspects of well-being, such as emotional satisfaction and personal values. For each of the domains that appeared in the box, Voyer *et al.* (2016) suggest potential indicators as well as methods and tools for data collection and analysis.

Domains of well-being (from a review of Quality of Life/Standard of Living literature)	Description
A resilient local economy	Economic or financial well-being, including employment, income, housing as well as quality and stability of employment.
Community health and safety	Physical and mental health, including life expectancy and availability of safe and healthy food and water.
Education and knowledge generation	The capability to build one's skill set and knowledge, including access to and involvement in learning opportunities (formal and informal).
A healthy environment	Physical, social and mental health benefits associated with the natural environment, including ecosystem services.
Integrated, culturally diverse and vibrant communities	Opportunities for cultural expression and engagement in community life regardless of ethnic, cultural or socio-economic background. Feelings of connection within social or geographical groups (bonding social capital), across different groups (bridging social capital) and with decision makers (linking social capital).
Cultural heritage and community identity	Connections with heritage and tradition. A shared sense of community identity.
Leisure and recreation	Work-life balance, including opportunities for fun, play and participation in the arts and cultural events.

To give an example of how this was done, the box below shows how the New South Wales wild-catch fishing industry contributes to integrated, culturally diverse, and vibrant communities.

Domain of community well-being	Contributions of the NSW wild-catch fishing industry		Indicators	Methods and tools for data collection and analysis
Integrated, culturally diverse and vibrant communities	Material	Contributions of the NSW wild-catch industry to the needs of a diverse community	Cultural significance of NSW seafood products Role of the fishing industry in providing opportunities for different socio-economic and cultural groups	• Qualitative interviews • Social questionnaire—fish merchants
		Involvement in citizenship activities and community events	Contributions to cultural events Sponsorship and donations	
	Relational	Role of the NSW Industry in building and maintaining social networks (formal and informal) in local communities (social capital)	Contributions to social capital—bridging, bonding and linking	• Qualitative interviews • Social questionnaire—fish merchants
	Subjective	Community awareness and beliefs in relation to the importance of the services provided by the fishing industry for community life	Importance of the role of the industry in community life Importance of seafood for community celebrations	• Qualitative interviews • Social questionnaire—general public

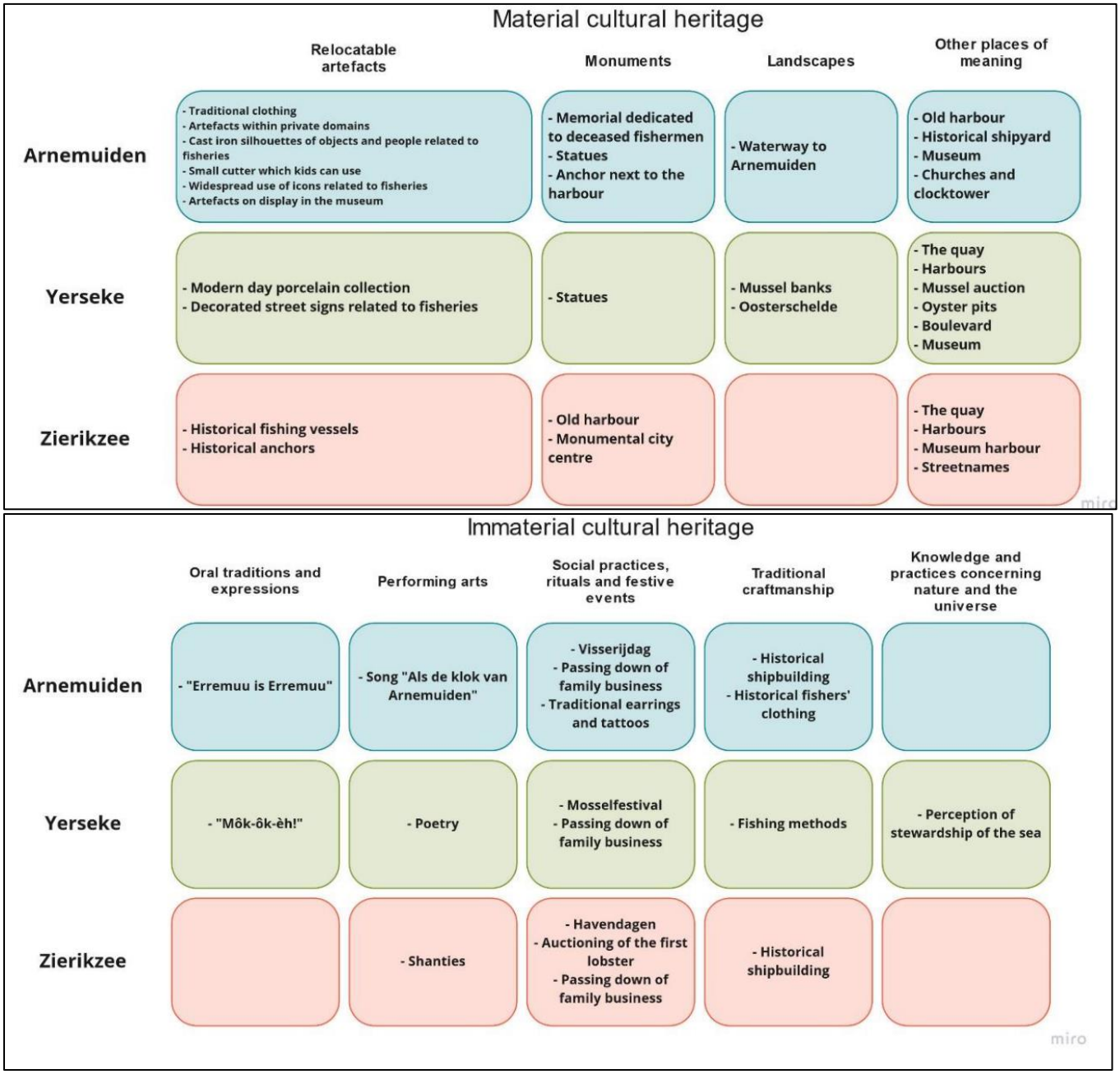
Source: Voyer *et al.* 2016

Fishing is an important element of the history of several countries, regions, and communities throughout Europe. Fisheries are an inextricable part of their cultural heritage and the unique identity that they have developed (Holm, 2012). In addition, fishing traditions supported local economies through fishing and fish processing (Symes and Phillipson, 2009) while, of course, fishers supported the local economies by acting as consumers.

It is important to mention that historical and cultural issues have both tangible and intangible dimensions. In a recent study describing the social and cultural value of fishing for the Netherlands, material and immaterial cultural heritage was mapped in short field trips to three fishing communities in Zeeland, a province in the South (Kraan et al., 2023). By way of illustration of what this might entail, these tables have been pasted in Figure 5. For material cultural heritage, relocatable artefacts were mapped, as were fisheries-related monuments, landscapes, as well as other places of meaning (such as the harbour and churches). For immaterial heritage, oral traditions and expressions were noted down, as were performing arts (such as a song snag at fishers' weddings), social practices, rituals, and festive events (such as fisheries festivals), traditional craftsmanship, as well as knowledge and practices concerning nature and the universe (such as perceptions of stewardship). Such preliminary fieldwork trips can help identify indicators.

Recent developments and the various environmental, economic, and social developments of the fishing sector throughout Europe (e.g. MPAs, increasing fuel prices, lack of available crew members) put pressure on the local communities and may endanger the sustainability of the historical and cultural importance of fisheries.

Figure 5 (Im)material cultural heritage related to fishing detected during fieldwork



Source: Kraan et al. (2023)

Identifying and/ or quantifying the historical and cultural importance of fisheries in local communities and/or national levels is not an easy task. There is a need for multiple indicators to describe and quantify different aspects of its multifaceted importance. The EWG identified a number of indicators that can "capture" different aspects of the historical and cultural importance of fisheries (Table 3). This list is by no means exhaustive but should serve as a starting point for gathering the relevant data.

Table 3 (Non-exhaustive) List of indicators for capturing different aspects of historical and cultural importance of fisheries

Indicator	Description	Example of data source/ type of data
(Commercial) fishers to total population	Indicate the significance of fisheries for the national economy and/or a local community. It can act as a horizontal indication that can proxy the economic and social significance of the fisheries. In this sense, it may also act as a proxy for the intangible assets of fishing, linking to traditional and historical aspects of fisheries.	AER, national statistics
Material Value		
Number of wooden vessels	The number of active wooden vessels and their ratio to the total number of vessels in the active fleet could provide a picture of the coastal landscape and its value for a fishing community, also taking into consideration that these vessels need special maintenance and repair made from dedicated experts (shipwrights), usually based in the local community. As such, wooden vessels are not present in all MS, and therefore, this indicator may be more relevant in specific EU regions (e.g., the Mediterranean).	National databases; Qualitative research (surveys, interviews)
Fish-related PDO products	The indicator refers to the presence of "Fresh fish, mollusks, and crustaceans" registered as Protected Designation of Origin (PDOs) (e.g., Botargo in Greece, i.e., product based on the eggs of the grey mullet). As these kinds of products have solid links to the place in which they are produced and need to be produced in a precise traditional way, they can be used as a proxy for the significance of fisheries culture and heritage.	Qualitative research (surveys, interviews); national database for PDO or other geographical indication products
Number of nautical museums	This number can be used to identify the historical significance of a place with its nautical traditions and the level of seamanship.	National databases; MS expert knowledge Qualitative research (surveys, interviews)
Museum exhibits and artefacts	Evaluate the presence of fishing-related exhibits and artefacts in local museums and cultural institutions.	National databases? Fieldwork
Number of fisheries-related festivals	Act as a proxy for the identification of the significance of fisheries in a local community, but also in the national context. The existence of such festivals, their density, and probably the number of participants may be used as a "hint" to identify the strongness of these interlinkages and the connection of fisheries with the history and tradition of a place (or a country in a greater context).	National databases Qualitative research (surveys, interviews)
(UNESCO) Heritage designations	Investigate whether fishing communities or sites have received official cultural heritage designations or recognition.	National databases? MS Expert knowledge Qualitative research (surveys, interviews)
Fishing-related arts and crafts	Assess the presence and work of local artisans who create fishing-related art and crafts.	Fieldwork

Immaterial		
Preservation efforts of cultural heritage	Evaluate local and national efforts to conserve and protect fishing-related cultural heritage sites, structures, and artefacts.	National databases? Qualitative research (surveys, interviews)
Community Narratives	Analyse community narratives and stories related to the role of fishing in shaping community identity.	Qualitative research (surveys, interviews)
Intangible Cultural Heritage on UNESCO Lists	Determine if fishing-related practices or traditions have been recognized as Intangible Cultural Heritage by UNESCO.	National databases? Qualitative research (surveys, interviews)
Oral History Archives or events	Evaluate the existence and accessibility of oral history archives that document the stories and experiences of fishing communities.	Qualitative research (surveys, interviews)
Traditional skills	Assess the (dis-)continuation of traditional fishing skills, such as boat-building or net-making.	Qualitative research (surveys, interviews)
Public perception and appreciation	Conduct surveys and gather public opinions on the historical and cultural significance of fishing communities.	Qualitative research (surveys, interviews)

Finally, to identify the immaterial value of fisheries in a community or a national context, it could also be beneficial to incorporate a field (sub-)survey to the MS field survey dedicated to the DCF (if applicable). Such a field survey would enable the participation and involvement of local stakeholders (such as fishers, local administration, local fish processing industries), which is acknowledged as particularly important in the relevant literature (e.g. Garcia and Charles, 2008). By gathering local stakeholders' knowledge and other information related to the local fishing traditions, this involvement may provide useful insight into the tangible and intangible aspects of fisheries. Social network analysis (e.g. Bodin and Crona, 2009) and ecosystem-services valuation (e.g. Barbier, 2012) can also be utilized if field research is applied; however, this seems more relevant for a community rather than a national-level approach.

3.6 Question 6: Generation renewal

a. How attractive is the profession for the younger generation (working -conditions and safety for men and women, training & skills, safety, income, social coverage, pension, working hours, time away from home, employment type (self-employed, full time, part time, etc.), level of professionalization, use of IT/technology, integration of environmental concerns, etc.)?
b. How many fishers have "dropped" or discontinued the family business, and why (safety, income, hardship, family itself doesn't want them to continue)?
c. What could make the profession more attractive?

3.6.1 How attractive is the profession for the younger generation

To address this question, it is necessary to understand that, as it is formulated, it is framed within the Common Fisheries Policy (CFP) since this includes the mission of ensuring the long-term sustainability of fisheries, both environmentally, socially, and economically. More specifically, it is linked to the Report on Fishers for the Future: Attracting a New Generation of Workers to the Fishing Industry and generating employment in coastal communities (European Parliament, 2021).

EWG 23-17 understands that this question requires a holistic analysis that includes all the factors that may promote or discourage the incorporation of young generations into the fishing sector. In fact, the attractiveness of the fishing sector to which this question refers can be understood as the set of positive incentives that guide the work preferences of younger people towards the fishing sector.

The European demographic scenario must be taken into account in this analysis. The negative impact of demographic decline is manifested in an increasingly smaller number of young people, which reduces the possibilities of generational change. Added to this factor is the fact that better educational opportunities and greater social and spatial mobility have favoured a scenario in which the option of deciding to work in the fishing industry has become less attractive (White, 2015). The social perspective on fishing has also changed. The view that fishing offers job security, social status, or a good economic position is no longer popular (Power, Norman and Dupré, 2014). Cases in which there is family pressure to convince children to work in the fishing sector are increasingly rare, and even the opposite trend is observed. To address this question, a clarification must be made about the age range to which the concept of the "younger generation" belongs. For this purpose, EWG 23-17 will take as a reference the definition contained in the Commission staff working document. On EU indicators in the field of youth, whereby youth population is "the total number of young people in the age-groups 15-19, 20-24 and 25-29 living in a member state of the European Union on January 1st" (European Commission, 2011). This information is available from Eurostat. Considering these measures, it would be beneficial to know what percentage of the active population in the fishing sector in each region is in the younger generation age range (15-29 years).

Once the target population for this indicator has been defined, it is necessary to consider the factors that will increase the attractiveness of this career path compared to others. The non-incorporation of young people in fishing is a problem that has been recognized for at least a couple of decades, which entails, in addition to economic problems, also others of a socio-cultural nature. Therefore, given the complexity and varied nature of the data needed to construct an indicator to measure the attractiveness of the sector for young people, a holistic approach is necessary. In addition, the abolition of the simplistic vision is also necessary in view of the fact that the specific characteristics of the different regions, fishing fleets, and fishing gear used must be taken into account.

Analysing the attractiveness of fishing as a professional career path for the younger generation requires information from both primary and secondary sources. Some of this information is collected through reports derived from the DCF's call for socioeconomic data on the EU fishing fleet, from the fishing databases of the member states, as well as analysing the institutional framework governing fisheries governance. However, more information is needed that is not provided through the data calls and would require an ad hoc data collection process using data collection techniques such as observation, surveys, interviews, and focus groups.

So, to assess the attractiveness of the fishing industry, economic, social, and psychological factors must be considered. Wage levels and income variability are important, but so are factors such as self-realization as a worker or the possibility of working outdoors. As a result, various monetary and non-monetary variables influence job satisfaction and the attractiveness of the fishing sector.

Based on Coopmans et al. (2021) research regarding generational renewal and its influencing factors, EWG 23-17 considers four spheres of influence to explain all the factors that are involved in the decision to become involved in the fishing sector. Figure 6 provides an adjusted framework in the case of fisheries that helps to identify indicators that capture the attractiveness of the sector. These four spheres range from the individual to the social.

The first sphere is the personal one. In this case, the personal motivations, tastes, emotions, beliefs, desires, or self-perceptions of each person are important, and all these variables affect the decision to become a professional fisher. Being your own boss, proximity to the sea, and connection with nature are common motivations, to name but a few, for adopting the fishing profession. On the contrary, the fact that fishing is a mentally and physically exhausting profession can push youngsters away from fishing.

The second factor is related to the early involvement in fisheries, which is more relevant for the offspring of fishing families. Early involvement usually happens when a person gets contact with the fisheries sector and gets to know fishing traditions at a very young age. This happens mainly to families that are practicing commercial fishing and whose children are introduced to fishing at an early stage. This factor basically describes socialization into fisheries since it shows the bonding of young people to the sea and fishing. This group of people are the ones someone expects to be most likely to follow the fisheries profession. Apart from fishing, the family factor also plays an important role in motivating youngsters to follow the family business in other professions of the primary sector (Brandth and Overrein, 2013).

The third factor, i.e., the career path, actually deals with the education and training required to practice a profession in the fishing industry. It is essential to have the necessary competencies to be able to perform the job efficiently. In fact, having theoretical knowledge as well as training on occupational hazards decreases the probability of suffering an accident at work, of any severity, in an occupation that has a comparatively higher level of accidents. Another aspect to be considered in terms of training is that the homogenization of degrees or work experience would be desirable. Labor mobility is an increasingly widespread reality, so having the possibility of standardizing training would increase the attractiveness of the profession.

Figure 6 The four spheres of influence determine the attractiveness of the fishing profession for the younger generations and, therefore, affect generational renewal.

Source: Coopmans et al., 2021 (adapted for fisheries)

Training is closely related to job opportunities and the worker's ability to move up the career ladder. However, there are also exogenous forces that can boost or hinder entry into the fishing labour market. An analysis of macroeconomic trends shows that regularly, the fishing sector becomes a refuge sector in the scenario of recession or economic crisis.

Therefore, the tightening of access to other labour markets increases the attractiveness of the fishing industry. In addition to the macroeconomic evolution of the economy, other factors can influence the attractiveness of the fishing industry, like the amount of leisure time, the possibility of going on vacation, or the work-life balance.

In relation to the study of the attractiveness of the fishing profession, it is necessary to study the strong entry barrier involved in obtaining the necessary financing to be able to practice it. The investment in a fishing vessel and the equipment necessary to carry out the work is high, especially taking into account the difficulties that the young population has in accessing financing. This factor is directly related to the institutional framework, as are the specific policies on the management of fishing resources. Certain allocations of rights may lead to a situation where transaction costs are so high that they discourage entry into the fishing labour market.

The fourth sphere, the societal sphere of influence, contains three factors that incorporate the local community context in the discussion on the attractiveness of the fishing profession. The first factor is related to the societal *appreciation for the fishing occupation which* can affect fishers' well-being. The second factor is related to the –actual or perceived- *lifestyle expectations.* This is reflected by normative beliefs on quality-of-life drivers and how these beliefs are in contrast with the general or personal beliefs of what the lifestyle of a fisher includes, such as undesirable working conditions and a skewed work-life balance (Coopmans et al., 2021).

The last factor is based on the *attractiveness of living in a fishing community and/or in a coastal area, in general.* This is an important driver for generational renewal because fishing is largely associated with sea proximity and living in a coastal community. Therefore, the attractiveness of the fishery profession depends, in turn, on the attractiveness of the enterprise location and the existence of decent infrastructure and essential public services like education and health services (Coopmans et al., 2021). Family business is related to the fisheries profession, but it also contains the social aspect and the dynamics between these two. Young people are more motivated to take over family vessels and to continue the fisheries profession. Overall, Table 4 provides an indicative list of indicators for capturing the attractiveness of the fishing sector.

Table 4 (Non-exhaustive) List of indicators for capturing the attractiveness of the fishing sector

Indicator	Description	Example of data source/ type of data
Younger generation in the total population of fisheries workers.	This ratio provides an insight into what percentage of the labour force in the fishing sector corresponds to the younger age group (age group 15-29). It would be calculated as young people (age group 15-29) as a share of the total population of fisheries workers.	Socioeconomics data calls.
No. of young people enrolled in vocational training related to the fishing industry	This ratio provides us with an insight into what percentage of the labour force in the fishing sector corresponds to the younger age group (age group 15-29). It would be calculated as young people (age group 15-29) as a share of the total population of fisheries workers.	National databases or national statistics.

No. of young people enrolled in BSc or MSc related to the fishing industry.	Increasing technological advances and the growth of interrelated processes demand an increase in knowledge about the sector. It is, therefore, relevant to know the number of young people (15-29 years old) who have a BSc or MSc related to the fishing industry.	National databases or national statistics.
Comparison of the salary of the different professional categories in the fishing industry with the salary of other sectors requiring similar training.	The salary issue is a deterrent if potential workers perceive it as insufficient for the tasks to be performed. Therefore, it would be helpful to know the range of average salaries for different job categories.	Socioeconomics data calls and national databases.
crew member vs vessel owner	Evaluate the possibility of getting a higher- or lower-category job	Socioeconomics data calls
hometown/ place of residency	The emotional connection to the city of birth or residence must be evaluated.	Socioeconomics data calls and national databases.
family members involved in fisheries	Determine family incentives, both negative and positive, to engage in fishing professionally.	Qualitative research (surveys, interviews)
Ownership of a boat by a family member	The purchase of a fishing boat involves a significant financial outlay, so being able to use an inherited boat means breaking one of the most significant economic barriers to entry into the sector.	Qualitative research (surveys, interviews)
Possession of a fishing license by a family member	Evaluation of access to the fishing license, which is one of the most significant legal barriers to entry into the sector.	Qualitative research (surveys, interviews)
Differentiated personal space for women on fishing vessels	Evaluate the possibility of having toilets, cabins, or showers differentiated by gender.	Qualitative research (surveys, interviews)
Complexity of administrative procedures for boarding non-staff	Bureaucratic complications in boarding non-crew personnel can limit young people's experiences with the fishing sector and make it difficult to attract them.	Qualitative research (surveys, interviews)
No. of schools (and proximity) (e.g., in a radial of x km.) No. of schools (in a radial of x km.)	Determine the number of schools as a factor that determines living conditions.	National databases or national statistics.
No. of hospital (and proximity) (e.g., in a radial of x km) No. of hospitals (in a radial of x km.)	Determine the number of hospitals as a factor that determines living conditions.	National databases or national statistics.
Proximity to the capital (of NUTS I, II, III)	Determine proximity to the capital as a factor that determines living conditions.	National databases or

Distance from capital of NUTS I, II, III (in a radial of x km.)		national statistics.
Proximity to transportation Hubs (e.g., airports, ports)	Determine proximity to the transportation hubs as a factor that determines living conditions	National databases or national statistics.
Employment type (self-employed, full time, part-time, etc.)	The type of employment is a determining factor depending on the potential worker's preferences regarding promotion possibilities, income level, family balance, etc.	Socioeconomics data calls and national databases.

Analysing the factors that determine the attractiveness of the fishing sector to the younger population is crucial for the survival of the sector. It is important to recognize the complexity of this task and to understand that for different regions, different fleet segments, and different target species, attention should be paid to changes in the preferences of potential young workers. In any case, it is crucial to understand that social analysis is an evolving analysis, and therefore, a regular supply of data would help to understand both current and future trends.

Generational change is a complex issue involving several factors. These include the demographic factor, in particular, the ageing of the population; the social factor, as in many fishing communities, the generational turnover has been broken for the first time, with young people moving to other sectors of the economy and their jobs being taken up by workers of foreign origin; the economic factor, as there are financial barriers to entry; and the environmental factor, as certain fishing grounds are closed temporarily or permanently.

Regular data collection is necessary, as it is a reliable data source. Knowledge of the preferences of the target population is fundamental to a thorough understanding of the potential for generational change in fisheries. To this end, data obtained from surveys, interviews, or focus groups must be truthful and the result of efficiently designed questionnaires that reveal these preferences in a clear and unambiguous way.

Moreover, it is important to conduct the study of these indicators from a gender perspective. It should be noted that women face many inequalities in wages and access to productive resources, technology, and markets, so being a woman can be a recessive factor in the attractiveness of the fishing sector (Gopal et al., 2020). In 2019, the STECF 20-06 report quantified that women represented 5.4% of total employment in the artisanal coastal fleet across the Union, compared to 1.9% in the large-scale fleet and 2.3% in the offshore fleet (European Commission. Joint Research Centre. & European Commission. Scientific, Technical and Economic Committee for Fisheries, 2020). Considering these data, it would be relevant to analyse the degree of attractiveness of the sector for a part of the population that did not make up the main labour force.

3.6.2 How many fishers have "dropped" or discontinued the family business, and why (safety, income, hardship, family itself doesn't want them to continue)?

Several cultural and social changes have influenced the trend towards an increase in the average age of fishery workers. While it is true that the incorporation of young people into the sector fluctuates due to the succession of different political and cultural scenarios, the long-term trend is clearly downward. Individuals, especially young people, have to overcome several obstacles before entry into the fishery sector. As far as small-scale fishing is concerned, the existence of market entry barriers, such as limited access to

fishing rights and the existence of moderate initial investment. In addition, the low profitability does not compensate for the high level of effort and commitment generated by this fleet segment. Large-scale fishing, on the other hand, faces other problems for new generations to join. Among them are the lack of real expectations of job promotion, a heavy workload with low pay, and the lack of family reconciliation (Lebedef and Chambers, 2023).

This specific question is related to the fact that apart from the barriers to entry, as mentioned above, there are secondary barriers that limit job satisfaction and growth in a fishing career, creating an early or forced exit (Lebedef and Champers, 2023). However, regarding the compatibility of this question with the DCF framework, it is important to mention that the population in the DCF is the vessel or potentially the employee (but only in the case of social variables and for a few MS). Therefore, the people who have dropped the profession are not included in the target population, and it is not easy to identify and allocate. In addition, there is a time-related issue. How many years are we going back to identify the family members who quit the fishery occupation? Therefore, there is a need for a threshold here (in terms of years).

The DCF target population may also cause troubles in identifying family businesses. The Family business is not the population unit, and it does not necessarily coincide with the fishing vessel, even in the case of SSF. A possible way to overcome this issue is to follow a two-step question approach during the socioeconomic survey for the DCF. The first step involves a question to identify whether the fishing enterprise that utilizes the fishing vessel is a family business. During the second step, the question of whether there are members in the family who dropped out of the business is asked. If the answer is yes, then an additional question to identify why they did so may be asked. However, this question may be ethically incorrect (as one family member replies on behalf of another family member).

Finally, another possibly helpful indicator that could be used is the "net" number of dropped fishing licenses in the fleet registry (dropped licenses minus new licenses). Of course, this indicator does not shed light on this specific question but may be useful to understand whether new fishing enterprises are created. Table 4 provides an indicative list of indicators for identifying the number of fishers dropped from the family business.

3.6.3 What could make the profession more attractive?

The fishing profession is challenging and one in which fishermen face many challenges every day. The problems and challenges that this profession is facing need to be further investigated in order to understand why it is not that attractive, especially among young people. The first step in order to answer the question of what measures and actions need to be taken is to assess to what extent the fishing profession is not attractive in which fields and how it affects fishermen and the future perspective of the fisheries profession. This first step is attempted to be answered, and it is described in detail in question 6a above. Actually, the survey conducted under question 6a will provide the template around which we need to proceed with question 6c because the problems identified in question 6a should be the baseline. Understanding the extent to which young persons are not attracted to the fishing profession and what are the reasons behind it should be the baseline for identifying the critical factors.

The information obtained from the current National Data Collection Programs and the social and economic data calls are not helpful for getting answers addressing the question of what should be changed to make the profession more attractive. Surveys or qualitative interviews need to be conducted. It is noted, though, that some related data, such as the value of landings, subsidies, wages, and unpaid labour are already collected under the national data Collection Programs.

Identifying what the target population is, is the next step. Based on the spheres of influence, Coopmans et al. (2021), regarding generational renewal and its influencing factors, these four spheres deal with personal, family business, management/administration, and societal factors. The target population for conducting the relevant surveys differs in accordance with which sphere one evaluates. For the first two spheres (personal and family business), the target population could be the existing fishermen. Yet, a distinction needs to be made between the different fleet segments and, at least, between small-scale and large-scale fishermen since they face different challenges. Small-scale fishermen face difficulty in entering the profession due to market-entry barriers, fishing effort limitations, and significant initial investments such as the purchase of a vessel.

On the other hand, the large-scale fishermen must consider, among others, the long working hours, the significant time away from home, and the lack of safety on-board. Our target population, though, cannot be only the existing professional fishermen (small-scale and large-scale fishermen) since they can provide answers relating to the problems they currently face. In order to understand the interpersonal and family dynamics, the offspring members (sons and daughters) of fisher's families need to be interviewed as well. Thus, the study needs to take into account the voice of the public and particularly of the youngsters.

Moreover, the policymakers should be interviewed to provide answers related to the legal framework in fisheries and whether the current framework is supportive enough to overcome the problems of management /administration identified in question 6a. Policymakers can answer issues related to the following:

- Fish abundance. It is related to the value of landings and, thus, income.
- Diversification of fishing activities. It can be a management measure to reduce fishing effort but, at the same time, an alternative to fishing income.
- Safety standards
- Easiness of entry. License systems vary from country to country, but in most countries, it is not very easy for newcomers to get a license and enter the fisheries profession. Especially in some specific fisheries that have quotas, there is no room for newcomers, or a fisher may want to pay much money to enter this fishery.
- Retirement age and pension schemes
- Cooperation among fishermen. There is a huge need for young fishers' associations worldwide. The young generation, as a new entrant to the market, often complains that they have a weak bargaining position. Associations can help them harmonize their production and sales to strengthen their market position (Nainggolan et al., 2020).

3.7 Question 7: Engagement & compliance

a. Which fishing communities are more engaged in representing their activity?

b. How are they represented in local/national decision bodies?

c. What role do the producer organisations and fishers' associations play?

d. How do these organisations and associations perceive their role and impact in fisheries management decisions?

e. How does the fishing community influence the level of compliance with rules?

3.7.1 Which fishing communities are more engaged in representing their activity?

Assessment summary: basic metrics can be delivered based on secondary sources to identify type, frequency and profile of participants in fishing communities. Understanding the quality of engagement requires ad hoc data and information gathering, not suitable to be obtained through administrative data calls.

Clarification is required in terms of the scope of what is to be measured to address this question. What specifically is meant by 'representing', 'more engaged' and 'activity'. These terms can have multiple interpretations. Once the parameters of these terms are defined, it is then possible to determine what information is required to answer this policy question. EWG 23-17 understands that the question aims to measure the quality of engagement.

Current administrative data calls are not useful for this indicator and information is not readily available. It is feasible to develop an indicator possibly in the medium term, but it will require ad hoc data gathering through surveys or other qualitative methods.

Fishing communities can represent their activity (e.g. target species, fishing technique or gear used, DCF fleet segment, inshore or offshore fishing, small-scale or large-scale fisheries) in many ways. Representation can include:

- Sectoral representation within fishers' organisations.
- Policy representation through decision-making processes.
- Consultative representation through advisory bodies.
- Scientific representation through participation in scientific networks and fora.

Since stakeholder engagement has become mainstream, many regulatory and policy frameworks set participation from fisheries organization as mandatory at given stages of the policy processes. Defining the baseline at Member State level can be supported by the NFP and community profiles.

Basic metrics could include i.e. profiles of participants from fishing communities, frequency.

Once the specific fishing communities are identified, the next step is to establish how engaged they are in representing their activity. In relation to the phrase 'more engaged', there is a need to distinguish between mere presence or attendance at meetings from engagement or meaningful participation. Data collection on the attendance of representatives at meetings or workshops can easily be gathered through the analysis of the vertical and horizontal networks of the governance system. For example, how many consultative bodies exist? Who participates in which ones and to whom they represent?

However, data collection for understanding the level of engagement and identifying meaningful participation requires more effort and can be achieved through assessment of the following:

- Level of description of the type of participation, analysis and outcomes associated to the participatory process (e.g. influence impact or engagement return).
- Basic principles (e.g. transparency and accountability)
- Identifying those that are excluded from the participatory channels.
- Understand the reasons for exclusion: (e.g. lack of capacity or resources, language barriers, do not know how to participate, do not think participation is necessary or worthy, strategy of apathy (silent protest), stakeholder fatigue).

In the existing body of literature, it is important to highlight that NOAA has developed fishing engagement and reliance indices. This approach is different in that it portrays the

importance or level of dependence of commercial or recreational fishing to coastal communities (measured through permits, fish dealers and vessel landings) rather than the level of engagement or degree of representation of fishing communities.

3.7.2 How are they represented in local/national decision bodies?

Assessment summary: basic metrics can be delivered based on secondary sources available.

Prior to answering this question, it is essential to establish if fishing communities are represented (e.g. all fishing communities or just some) or not and if so, how they are represented (e.g. partially, or completely) noting that in some cases, certain fleet segments or clusters may be excluded. In addition, it is important to highlight that representation at a regional level (and not just local and national) may be particularly important in certain MS. The required information for this question cannot currently be collected from administrative calls.

An indicator could be developed with the information already available from different sources resource-permitting. It would need to include the profile or type of representation of these bodies (e.g. observer, member, chair/president or other decision-making position). This information would provide descriptive information on the status of their representation in terms of:

- Number of bodies and level of authority/ decision-making.
- Number of bodies in which a given organisation is represented.

This information in itself would not be adequate to measure how effective this representation is. It is necessary to understand how this way of being represented affects their capability to participate, influence or have a voice. Further information could be extrapolated by investigating the following:

- Ratio of bodies in which a given organisation is represented/total existing bodies.
- Ratio of bodies in which a given organisation has decision-making position/total ones in which they participate.
- The figures need to be weighted considering the relative importance to the organisations (i.e. an organisation may not participate in each body because it is irrelevant to its interest or scope)

3.7.3 What role do the producer organisations and fishers' associations play?

Assessment summary: indicators can be developed with available information. Additional information needs to be gathered for understanding the different roles and their implications, requiring qualitative methods.

It is necessary to define what is meant by the term 'role' in the context of this question. The assumption is that it is within the limits of local/ national decision bodies. The required information for this question cannot currently be collected from administrative calls. It may not be feasible to develop an indicator for this policy question, but information can be sourced resource-permitting.

It is essential to highlight that from a CFP perspective, there is a significant difference between producer organisations (POs) and fishers' associations. In the EU, POs[1] at MS level have a highly defined role at to play based on regulations and the funding they receive. POs have obligations with regard to implementing the CFP objectives, they have a voice and a seat at the table which is described through the decision-making process

and standardised under common EU-wide rules. More than 210 POs have been set up by fishery or aquaculture producers to-date. Fisheries organisations differ from POs, they play a less formal role and can include any organised group of fishers at local, regional, national, transnational levels.

The assumption associated with this question is that both POs and fishers' associations represent their members and have particular features associated to each MS (e.g. managing local market). This can be detailed in the National Profiles by collecting the following:

- Evaluating if organisations and associations are informed, consulted, engaged, co-decide, or decide. Information can be obtained through secondary sources and assessed based on Table 5, the typology of participation by the fishing community in fisheries management (Leite and Pita, 2016).
- To gain a comprehensive understanding of the level of engagement, it could be further assessed in terms of the following (Stephenson et al., 2018):
    - Collaborative: Collaborative relationships within and between participants in decision-making.
    - Transparent: Open and informed policies, procedures, decisions, and supporting documentation.
    - Inclusive: Processes that support participation by all parties with a legitimate interest.
    - Predictable: Predictable and consistent decision-making procedures that are not changed without adequate consultation or justification.
    - Flexible and responsive processes that can be adapted to changing circumstances.
    - Accountable: Explicit mechanisms of responsibility for actions, decisions, and outcomes,

It is important to note that depending on the MS, the level of complexity of networks of organisations and associations can be high and this might be a resource heavy activity.

Table 5 Example of an evaluation tool to measure level of engagement, participation and representation of the fishing community (Leite and Pita, 2016).

Table 1. Typology of participation with a detailed description of the different levels of participation of the fishing community in fisheries management (adapted from Pretty [24] and Arnstein [16]).

Levels	Description
Passive participation:	*1-way flow of information.* It involves unilateral announcements by an administration or project managers without consulting fishers. The information being shared belongs only to external professionals. It is generally perceived as a first step towards legitimate participation.
Participation by consultation:	*2-way flow of information.* Fishers participate by being consulted or by answering questions, usually previously defined by external agents. Such a consultative process does not concede any share in decision making, and the responsible administration is under no obligation to accept fishers' views. The extent of the consultation will depend of the technical quality of the advice, social capital and organization within the community.
Functional participation:	*Government driven partnership.* Participation seen by external agencies as a means to achieve predetermined goals. Usually, funding is given by the government or responsible administration. Decision-making can be shared but final responsibility is given to the administration. Highly dependent of external economic factors and political will.
Interactive participation:	*Industry driven partnership.* Participation is seen as a right, not just the means to achieve project goals. There is usually a formal partnership with administration to share planning and decision-making responsibilities. Often, industry produces independent management advice through sub-contracting technicians and voluntarily participates in monitoring design, data collection and analysis.
Self-mobilization:	*Community control of management* is fairly independent from other institutions, including funding. Administration or NGOs may provide a framework of support but the community retains control over resource management.

In terms of existing data sources, in addition to the role of POs defined clearly under Regulation (EU) No 1379/2013 (the CMO Regulation), the following quantitative data is readily available which provides further context to the role and importance of POs, Associations of POs (APOs) and Inter-Branch Organisations (IBOs):

- Number of POs.
- Number of APOs- Groups of POs recognised in one or more Member States.
- Number of IBOs- Groups of operators from across the supply chain in one or more Member States.
- Number of producers or operators per PO.
- Number of producers or operators per association of POs.
- Number of producers or operators per IBO.
- % of producers or operators' member of PO
- % of producers or operators' member of association of POs.
- % of producers or operators' member of IBO.
- Annual value of turnover of EU marketed production (thousand euros).
- % of production placed on the market (value) by POs.
- % of production placed on the market (value) by association of POs.
- % of production placed on the market (value) by IBOs.
- % of production placed on the market (volume) by POs.
- % of production placed on the market (volume) by association of POs.
- % of production placed on the market (volume) by IBOs.

In addition to the above, further Information that could be worth gathering includes the number of POs that are adopting fisheries regulations. This can be gathered through MS or the POs Production and Marketing Plans (PMPs).

There are limitations to the available data. Whilst it is relatively easy to quantify the number of Producer Organisations, Co-operatives, and other fishers' associations, this in itself does not tell us much. In addition, current sources do not readily include a central repository of information on fishers' associations. This data could be sourced from secondary sources (e.g. internet sources) or alternatively by a survey of all associations which may be both labour and time intensive.

3.7.4 How do these organisations and associations perceive their role and impact in fisheries management decisions?

Assessment summary: preliminary research is needed to gather data and set a baseline. Building on the research findings, basic metrics and processes for data collection can be proposed.

For this question to be addressed, it is necessary to compare the facts (e.g. the formal role assigned in legislation or decision-making processes to POs and other organizations) and their perception of their role. The first part of this question seeks to identify how close the reality of their role is to the legal description of their formal roles. Similarly, for the second part of this question, the impact of fisheries management decisions as documented by the European Commission needs to be compared to the perception of the impact by organisations and associations. The required information for this question cannot currently be collected from administrative calls. It may not be feasible to develop an indicator for this policy question, but information can be sourced resource-permitting.

Perceptions are a multi-dimensional and complex concept involving beliefs and beliefs systems (values), opinions, perspectives, and world views. Measuring perceptions requires a robust methodological approach. Preliminary research is needed before further steps can be taken in developing an indicator.

Perception can be measured in different ways, including self-report measures: magnitude estimation, magnitude production, method of adjustment, forced choice, Likert scale reporting, and the outcomes dimension. The outcomes dimension analyses two key components:

- Effective: processes that produce the intended outcomes and can be seen to do so.
- Legitimate: processes and outcomes that are generally seen as fair and reasonable regardless of self-interest.

The funding mechanisms that are available to organisations and associations could be used as a test case (e.g. Union Priority 5- Marketing and Processing and the Production and Marketing Plans (PMP)). Factors to consider include; what is the value for money for these? What is the actual impact on the industry? What is the perceived impact?

Similar research has been conducted by Hegland et al. (2010) whereby stakeholder opinions of CFP regionalisation were surveys with the dual purpose of learning more about people's perceptions of benefits, challenges and cleavages, as well as fleshing out fundamentally different ways of putting regionalisation into practice. Lessons from this research could be applied to address the policy question.

3.7.5 How does the fishing community influence the level of compliance with the rules?

Assessment summary: preliminary information can be obtained from secondary sources for descriptive baseline, while understanding the influence in the compliance level calls for tailored research. Methodological approaches are available and have been already applied.

The scope of this question is significantly different from the previous questions on engagement (7a- d) in that it relates to compliance. Clarification is required in terms of what is meant by *compliance with the rules*? The assumption here is that it pertains to CFP fishing rules but in its current format 'the rules' could be interpreted as beyond just fisheries rules (e.g. food safety, maritime navigation and safety). The required information for this question cannot currently be collected from administrative calls. It is unclear if it is feasible to develop an indicator for this policy question, but information can be sourced to further explore the possibility resource-permitting.

Current compliance levels are reported as part of the EU fisheries control system under Council Regulation (EC) No 1224/2009, by the Member States' fisheries controls regulatory bodies, thus certain types of compliance data exist. Fisheries control measures include:

- Controls on access to waters (e.g. fishing licences)
- Fishing effort (e.g. vessels tonnage and engine power)
- Technical measures (e.g. rules on fishing gears)
- Monitoring and registration of catches that are extracted from the seas and oceans by the EU fishing fleet.

Article 118 of the Control Regulation states that, every five years, Member States shall transmit a report to the Commission on the application of this Regulation. However, the focus of the reporting is not on those that do comply and conversely, is often reported in terms of infringements in cases of non-compliance or the number of fisheries vessels inspections (i.e. enforcement data). This is typically in the form of quantitative data, not necessarily at the appropriate level of aggregation (i.e. fishing community level) and does not include nuanced information on how fishing communities influence compliance levels. While some Member States publish annual reports on fisheries controls, in others information is not generally available outside public servants.

Potential indicators for the level of compliance component of this question could include the following:

- Ratio of sanctions/inspections.
- Ratio of inspections/operative vessels and fishing days.

For the second component of this question, it needs to be clarified that perception of compliance and influence are different things, and it is important to make this distinction. Information on the perceptions of a fishing community need to be gathered through a survey or other qualitative research (e.g. interviews, focus groups). While this may be feasible in the medium to long term, this approach would be resource intensive (both human and financial) and time consuming. Methodological approaches on perceptions need to be robust to avoid bias and allow comparison.

Furthermore, in order to gather information on how the fishing community influences (i.e., perceive their influence on) the level of compliance, the applicable social rules within different fishing communities, both formal and informal, would need to be identified. In addition, the robustness of the social control or acceptability of misbehaviour normally at fishing community level would need to be established. This information is potentially better

addressed through the Community profiles. Furthermore, community cohesion may create a system of rules within the community stronger and more relevant to be followed that the legal formal system. Heterogeneity or homogeneity is shaped by multiple cultural or political factors; e.g. religion may bring an additional set of norms influencing compliance.

Managing biological resources requires that rules of behaviour are followed (Keane et al., 2008). Beyond the descriptive data often gathered in compliance reports (e.g. inspections and sanctions), there are methods such as the T11 scale (Etiegni et al. 2011) widely used for measuring acceptance and influence. The scale focus on the following:

- Scope of acceptance: To what extent do you accept the regulations you need to comply with while fishing?
- Respect for authorities: To what extent do you accept the government authority and other official authority in the fisheries sector?
- Control by a non-official authority: How likely are you to experience condemnation from other fishers if you don't follow the rules?
- Risk of reporting: Assess the risk / probability of other fishers reporting you if you don't adhere to the fishing rules.
- Risk of inspection: Assess the possibility / probability of the state inspection or control of your fisheries activities.
- Risk of detection: Assess the possibility / probability of an inspection detecting someone who is fishing against the rules.
- Severity of sanctions/consequences: how sever a punishment do you expect in case of a petty offence or a criminal procedure for failure to comply with the rules?

The factors shaping compliance levels can be addressed through analytical frameworks (Figure 7) based on the following hypotheses from economic and sociological theories (Raakjaer, 2003):

1) Compliance of regulations depends on the economic gain of breaking regulations compared to the risk of being detected and the economic sanctions of rule breaking.
2) Compliance depends on the legitimacy of the regulatory system and the rules in relation to both context and the procedures, according to which they were determined. In this respect equity is a major point.
3) Fisheries have high transaction costs due to uncertainties in fisheries management and the lack of legitimacy of regulations, which increases the cost of control and enforcement.
4) Fisheries management institutions play an important role in coordination and allocation of resources. In the political and economic literature, institutions are considered as crucial allocation mechanisms.

According to Raakjaer (2023), as illustrated in Figure 7, factors that influence compliance in fisheries include (i) industry structure; economic performance, fleet capacity, fleet composition, geography, demography; (ii) control and enforcement; type and dimension of control and enforcement activities; and (iii) internal obligations are divided in legitimacy and moral/norms. Both factors impose several subfactors.

Figure 7 Framework for analysing compliance in fisheries (Nielsen, 2003).

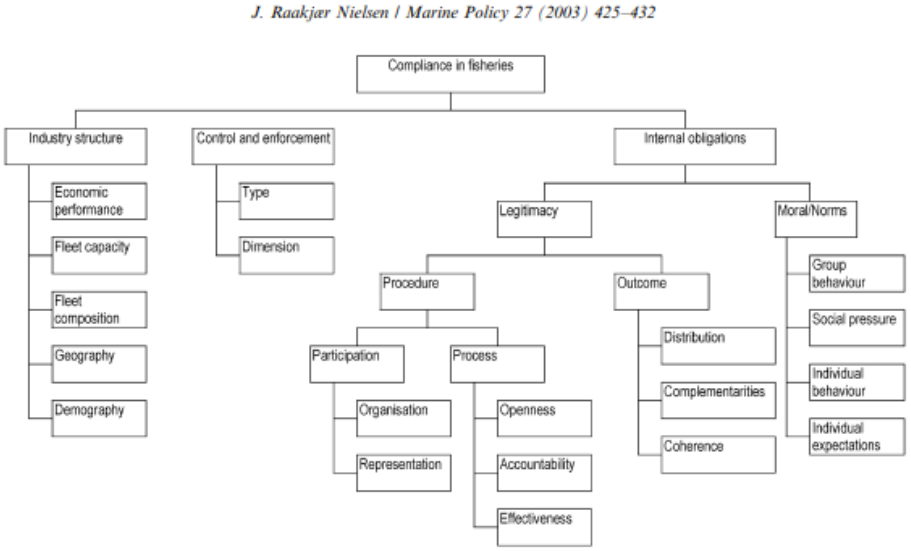


Fig. 1. Framework for analysing compliance in fisheries.

Research on the profiles of non-compliant fishers and poachers provides useful insights to understand the issue, as well as to design policy responses. For instance, the Spanish NFP cites Ballesteros and Rodríguez-Rodríguez (2018), which compiled a non-exclusive list of 19 types of poachers present along the Galician coast, identified by fishers' associations (e.g. insiders, profit-motivated, recreational, unemployed, at risk or suffering social exclusion, or needy and greedy poachers). The authors conclude that poaching is widespread, deeply rooted in coastal communities, and accepted as a mechanism of community protection for subsistence.

To showcase how tailored research can address the compliance phenomena and hence respond the proposed policy question, studies on the landing obligation address how compliance is influenced by social and cultural factors (Eliasen et al., 2014).

3.8 Conclusion

Based on the *Scoping paper for STECF EWG 23-17: DG MARE policy questions for social indicators* an analysis was made of these questions. The analysis focused on the scope of the questions and determination of the specific context of the questions, the policy relevance of individual concepts, the possibility to use indicators in the process of answering the question and the way relevant date could be obtained.

For some of the questions already a number of available sources could be indicated, such as the DCF and the NFP. For other questions additional effort has to be rendered, for example by way of developing questionnaires, performing fieldwork, interviews or focus group discussions.

It becomes clear that although a number of policy questions can be answered at the national level, the more in-depth questions need to be addressed at the community level and at the level of the individual fisher/family/enterprise. As an example, in Annex 1 an analysis is presented that for each of the sub-questions of *question 1: state of play* and *question 3: dependency* contains a description of elements of the sub-question, possible variables and indicators and for each whether these are quantitative or qualitative data,

whether these data can be sourced from the DCF or should be sourced elsewhere, the level at which these data are to be collected (the unit of analysis) and way of collecting these data (e.g. interviews, survey).

The answers provided for TOR 2 and the analysis presented here is but a first step in a wider process. The next step will be for DG MARE to, based on this analysis, consult the wider stakeholder community to further develop the set of policy questions for social indicators. Based on this next step a second analysis of indicators and way of collecting data could be developed.

When a more final suite of social indicators is developed these can then be used to further develop the conceptual framework which positions the social indicators in the suit of fisheries indicators (ecological, environmental, economic), providing the linkage for integrative analysis and advice. In addition, this final suite of indicators and policy questions can then be used to provide a more definitive conceptual validation, beyond the linkages and validation provided in the current report.

4 TOR 3 MEMBER STATES' RESPONSES TO QUESTIONNAIRE OVER ARTICLE 17 IMPLEMENTATION

4.1 Introduction

Article 17 of the current CFP states:

"When allocating the fishing opportunities available to them, as referred to in Article 16, Member States shall use transparent and objective criteria including those of an environmental, social and economic nature. The criteria to be used may include, inter alia, the impact of fishing on the environment, the history of compliance, the contribution to the local economy and historic catch levels. Within the fishing opportunities allocated to them, Member States shall endeavour to provide incentives to fishing vessels deploying selective fishing gear or using fishing techniques with reduced environmental impact, such as reduced energy consumption or habitat damage"

In the previous STECF expert working group dealing with social issues, EWG 22-14[14], a general introduction was developed to the historical roots of the distribution of fishing opportunities in Europe, which we summarise in the next paragraphs for a general overview of the context of the regulation. In annex 3 of that report, a new questionnaire was developed to improve the information collected from the MS about the criteria in the allocation, besides their application of environmental, social and economic variables in the process. EWG 23-17 assessed responses of the Member States to the European Commission's (EC) questionnaire named "Criteria for the allocation of fishing opportunities in EU Member States" as of September 2023 about the implementation of Article 17 of Regulation (EU) No 1380/2013 during the last year. As noted in EWG-22-14, many countries maintain historic catches as the primary criterion for the distribution of fishing opportunities.

In Europe, there is a lengthy history of fishing rights allocation schemes, beginning in the last decades with the implementation of Total Allowable Catches (TACs; 1970s) as a standard for restricting catches in specific fisheries due to the biological development of stocks and fishing pressure. There is an apparent connection between the historical catches of each MS and the CFP notion of relative stability. Since the EU CFP's inception, this principle has been utilised to determine how catches are distributed across member states; therefore, it should come as no surprise that it has also been a crucial component in deciding how fishing opportunities are distributed inside each nation. Furthermore, European countries have been dealing with fishing opportunities well before the EC had an interest in these issues. This way, some countries had already established allocation systems long before the Art. 17 was included in the CFP. That is the case of the Netherlands, which introduced the system of individual quotas in 1976, and of individual tradable quotas (ITQs) in the 1980s (Hoefnagel and de Vos, 2017).

The pre-existing framework of fisheries administrations in member states, and their systems of distributing fishing opportunities, have proved to constitute an obstacle to the implementation of Art. 17, due to institutional inertia, where "need for agreement amongst a large number of interdependent decision-makers has been an obstacle to required reform" (Gezelius et al., 2010, p. 472). That way, the implementation of Regulation (EU) No 1380/2013 has encountered pragmatic issues that have restricted the influence of Art. 17 on national regulations.

[14] On Social data in EU fisheries, 7-11 November 2022, on line.

According to Article 17 of the CFP regulation, MS "shall use transparent and objective criteria including those of an environmental, social and economic nature" for the allocation of fishing opportunities. In light of the legal weakness of some aspects of Art. 17, MS with complex ITQ or individual quota systems have not made relevant modifications to their existing setups. In the absence of official and clear guidelines on the implementation of Art 17, there has been a limited opportunity to engage with the implementation of the Article and a tendency for the MS to be using the traditional and straightforward criterion of 'historical catch records' for the allocation of the fishing opportunities. Other countries have introduced some elements of the Art. 17 in their national laws, even though in most cases, the heavier weight is still allocated to historical rights. This resulted in a Resolution[15] voted by the European Parliament in 2022:

"*notes that there is a lack of transparency and that several Member States are not making public what criteria they apply when distributing fishing opportunities and encourages them to make those criteria public and easily accessible, recalls that an objective allocation method entails the clear and unambiguous description of well-defined allocation criteria including a clear description of the relative weightings of criteria or the conditions for their use in case of multiple criteria for allocation*". The EP's Resolution goes as far as to call on the Commission to" start infringement procedures against Member States that are not respecting their obligations in terms of transparency on the allocation of fishing opportunities".

There is also a lack of coherency in relevant EU policies and missing opportunities to create a legal framework on how Art 17 might be addressed through other relevant EU policies, such as for example in the EU action plan: Protecting and restoring marine ecosystems for sustainable and resilient fisheries (EUR-Lex - 52023DC0102 - EN - EUR-Lex (europa.eu).

The questionnaire analysed in the current report was completed by 22 Member States, which covers all coastal MS. Though data is not available to the current EWG about the coverage of the previous round of MS consultation in 2022, the first consultations previous to this questionnaire which were performed *by* the European Commission in 2016 and 2020 were not completed by all relevant MS. As an example, only 16 MS answered in 2020 (see EWG 20.14, Table 4.1).

There are two key concepts in the implementation of art.17 which are transparency and objectivity (in particular referring to the definition of fishing opportunities).

Transparency as completeness in the answers of the questionnaire would be the most basic approach to this TOR. Moreover, transparency as simply the completion of the questions in the sense that MS responded them in the first place, before the EWG moved further to analyse the details of the content of their responses. The degree of completeness of the content of MS answers, has however been difficult to assess due among others to the lack of a baseline, and this is a conclusion of the current EWG. Meanwhile, other relevant aspects of transparency have at least partially been covered by some member

[15] Report on the implementation of Article 17 of the Common Fisheries Policy Regulation | A9-0152/2022 | European Parliament (europa.eu).

states, as transparency implying the first degree in a participation process, or access to information.

Access to information has been institutionalised in the EU through the Aarhus Convention – the United Nations Economic Commission for Europe (UNECE) Convention on access to information, public participation in decision-making and access to justice in environmental matters. According to this Convention, access to information "refers to the public's right to receive environmental information held by public authorities, such as for example information on policies or measures affecting the environment. Additionally, public participation refers to the public's right to meaningfully participate in environmental decision-making regarding projects affecting the environment and plans and programmes relating to the environment. What is therefore required in terms of transparency by the MS in the allocation of fishing opportunities is also required through the Aarhus Convention. MS must be able to respond to actions they take that supposedly have an environmental outcome.

Objectivity of the criteria, as demanded among others by the European Parliament resolution (EP 2022[16]), includes clearly stating the elements of each criteria. These elements are already mentioned in the allocation literature such as the definition of fishing opportunity (e.g. what is being allocated, how much, to whom, duration of the allocation etc.). The expression "fishing opportunities" is not clearly defined in EU legal texts and guidance. For example, though it is mentioned in the current CFP text it is not explicitly defined. Even if the previous CFP[17] defined it in the following way in its article 3 (q): "fishing opportunity' means a quantified legal entitlement to fish, expressed in terms of catches and/or fishing effort" this definition is not legally binding. While the EC seems to equate fishing opportunities with TAC[18], the EP also considers effort quotas as part of the definition. Other definitions of fishing opportunity go as far as including spatial and temporary allocation. When looking at the scientific literature, there is also a variety of definitions or at least different terminology for fishing opportunities, from allocation of resource to allocation of rights or access, in different disciplines or geographic areas (e.g. Regier, 1985, Plummer et al., 2012, Steven, 1990) so there is room for confusion. In this TOR we have considered the definition of fishing opportunities chosen by each MS in their answers, which coincide with the most restrictive definition which only includes TAC.

4.2 Detailed analysis about each national system (TOR 3 a)

Belgium

Belgium reports to use environmental and social criteria for the allocation of fishing opportunities. Among the environmental criteria, selective gears and energy consumption are considered. Belgium explains that the selectivity of the gears used by the fleet that receives the fishing allocation has improved and that - although not mandatory yet - selectivity improvements are taking place in the fleet. The same applies to efficient motors which were introduced first in 2008 as a result of the economic crisis. Belgium does not

[16] "Objective allocation method entails the clear and unambiguous description of well-defined allocation criteria including a clear description of the relative weightings of criteria or the conditions for their use in case of multiple criteria for allocation".

[17] COUNCIL REGULATION (EC) No 2371/2002 of 20 December 2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy.

[18] See for example: https://www.consilium.europa.eu/en/policies/eu-fish-stocks/tacs-and-fishing-opportunities/

report issues of transparency but only POs have access to the allocation process. The outcomes are published by legislation.

Bulgaria

Bulgaria applied the article 17 for the allocation of fishing opportunities for turbot in 2022. Turbot is the only species subject to fishing opportunities in this country. The three criteria set up by article 17 were used and historical track records too.

Environmental criteria

Two of the four environmental criteria found in the questionnaire were used for the selectivity of the gears to reduce environmental impacts and damage to habitats. These criteria are applicable to turbot fishing and to all segments of the fleet. The country established a requirement for the use of static gillnets with a mesh size of at least 400 mm. Since then, all other types of fishing gears for turbot fishing are prohibited. A third criterion is the technical aids to reduce by-catches of mammals and birds. An incentive-based approach was implemented to encourage the use of active acoustic devices to repel cetaceans. The presence of such devices and their greater number is giving vessels a higher number of points in the procedure of allocation of fishing opportunities.

Social and Economic criteria

To support young fishers the country is granting more points to all vessels hiring crew members between 18 and 30 years old and practising turbot fishing. Vessels using crew having work contracts have also higher points for turbot fishing.

Concerning the support to coastal/small scale fisheries Bulgaria applied this criterion depending on the length of the fishing vessels and a preference is given to vessels with a total length of less than 10 metres.

Historical track records

Allocation of turbot fishing opportunities based on historical catches is the other criterion. In this case the allocation system is based on the level of utilisation of the individual quota for turbot in the period 2015 - 2019. The higher level of utilisation is assessed higher, and for low levels of utilisation of the individual quota (below 50% in 2018 and 2019) points are reduced. The use of historical track records has also another significance, the promotion and support of the traditional fishing local communities.

Other criteria

Bulgaria uses legal/compliance criteria, in a case of IUU fishing or infringements (Reg. (EC) № 1005/2008) vessels cannot access fishing individual quota for turbot. In a case that vessel licence is revoked vessels cannot access individual quota.

Transparency

In matters of transparency consultation on the allocation of fishing opportunities is realised and the allocation process is part of the national law. The process is documented and published online. Members of the sector as well as the general public can access information related to the allocation process. Producers Organisations as well as other fishers' organisations can access information about the process of fishing opportunities allocation. All the information about the allocation *process* of fishing opportunities is available online:

https://iara.government.bg/wps/portal/iara-web/press-center/news/kalkan2022

The *outcome* of allocation of fishing opportunities is documented and published. All fishere organisations and the general public can access. Other interested parties can access after a request. Information is accessible online in dedicated site

https://iara.government.bg/wps/portal/iara-web/search?query=%D0%BA%D0%BE%D1%80%D0%B0%D0%B1%D0%B8

Cyprus

The quota allocation process is only relevant for the blue fin tuna (BFT) stock, based on the limitations set in the management and recovery plans issued by ICCAT. The only criterion used for the allocation of the quotas is that of historical catch records. Catches of the last 5 years are used and in the case that there are no records of catches in the last 5 years, the authorisation is given to another fisher (if there is one).

Germany

Several Art. 17 criteria are used in the allocation process, but not the environmental criteria. Social and economic criteria weigh 20% in the allocation process. Unused quota needs to be communicated; if more than 5% of quota is unused at the end of the year and not returned to the agency in time that will be deducted in the following year. The system includes support for newcomers by allocating freed quotas ("the overarching principle of relative stability and based on five criteria", defined in paragraph 3 of the German Marine Fisheries Act[19]). Criterion 5 ("particular concerns" /besondere Betroffenheit) comes into effect especially in case of an additional available quota. Under criterion 5, freed available quota has been and can be allocated to newcomers (independent of segment, region, etc.) to support profitability of their business activities and strengthen future sustainability of the fleet, and extra quota reserves freed from permanent cessation may be allocated to SSF in Baltic fisheries. Historical track records weigh, in general, 70% in the allocation process. Relative stability is an overarching principle and fundamental criteria, based on data from the 1980s. Other criteria are also taken into account in the allocation (10% in the allocation process), mainly the history of compliance.

The allocation process is embedded in the law, and interested parties are consulted before finalising the allocation process. The allocation *process* is not documented and published, nor is the allocation *outcome*.

Denmark

Fishing opportunities are allocated using environmental criteria, social criteria, and historical track record. Environmental criteria pertain to the use of selective fishing gear for reduced environmental impact, aimed at reduced habitat damage. Social criteria include *support for young fishers, support for newcomers, and support for coastal fisheries/small-scale fisheries*. Regarding historical criteria, a system of transferable fishing concessions (TFC's) is used for almost every demersal, pelagic and industrial quota, as well as for mussels. These were allocated in the period 2003-2010 for most of the quotas. The criteria used were mainly based on the historic fishery of the individual vessels in the preceding three years before the TFC's were allocated.

[19] Seefischereigesetz in German

The allocation process of fishing opportunities is embedded in the law, documented and published, and accessible by the general public. Interested parties are consulted before the finalisation of the allocations. Allocation outcome of fishing opportunities is not documented and published (online or offline).

Estonia

Estonia considers economic and social criteria, historical catch records and history of compliance for its quota allocation. The stable access of small-scale coastal fisheries is taken into account in the allocation of the herring quota, through a yearly tripartite agreement between government, coastal fishermen and trawling sector. Support to local fisheries communities takes the form of a specific consideration of catches in different counties and small islands. This is done in order to ensure a sufficient amount of quota for fishermen from different counties and for small islands (Kihnu and Manõja) in order to protect their cultural heritage for carrying out fishing activities. Lastly, other social and/or economic criteria include establishing the historical catch pattern as the basis for the quota allocation agreement in a differentiated way, taking into account the real catches of both sectors and allocating sufficient amount of fishing opportunities for coastal fishermen to maintain their standard of living and promote small-scale fishing activities. For economic responsibility and investment decisions, Estonia sets the duration of fishing opportunities allocation at a minimum of three years, irrespective of the catches. This is documented in art Art. 51 of the Estonian Fishing Act:

https://www.riigiteataja.ee/en/eli/ee/Riigikogu/act/518122020004/consolide

The MS also allows the sale of fishing rights to newcomers.

Finally, a compliance criterion is applied. In case of more than one penalty for serious violations of fishing requirements (as stated in specified in subsection 1 of § 71(1) of Fishing Act (§ 56 lg 3): (3)) in the same water body, water area or county, the fishing opportunities will be reduced by 10% for the two years following the last penalty.

Transparency

For transparency, both process and outcomes of allocation are accessible to the general public through dedicated websites. For process, see:

https://eelnoud.valitsus.ee/main#7GSfoDnz, for the outcomes, https://www.riigiteataja.ee/akt/121122022019 .

Greece

Greece does not apply Article 17. The reason stated by the MS is that individual quotas are not allocated and therefore there is no need to apply Article 17.

Spain

In 2022, article 17 was applied for the allocation of fishing opportunities. For this allocation environmental, social and economic criteria were considered.

Environmental criteria

It is noticed that selectivity of gears aiming at the reduction of impact on environment and damage of habitats were considered as well as the technical aids to reduce by-catches of mammals and birds. Other environmental criteria targeting the reduction of environmental

impacts as such fleet segments, species, regions or areas were used according to the stocks. For example, a temporary closure for purse seiners targeting bigeye tuna (BET) is observed during the season of high presence of juveniles in the area. In the Atlantic area, 5% of the quota of bigeye tuna is allocated to vessels having less impact on juveniles. Additional quotas obtained through swaps are used by fleets increasing the selectivity of gears. It is the case of artisanal vessels using selective hooks and targeting mainly mackerel.

Few more examples from the Mediterranean are given, the first concerns the allocation of fishing days to trawlers, 8% of the allocation is depending on the number of days of the temporary closures imposed between 2014 and 2018 and 5% of the increased selectivity (using a bigger mesh size in the net). Moreover, trawlers using nets with 45 mm mesh size for coastal fisheries, instead of the 40 mm legal size or using 50mm for deep fishery to blue and red shrimp, have access to a 5% of the annual fishing days allocated to Spain under the WestMed MAP.

Social and economic criteria

Support for coastal fisheries/small-scale fisheries

In 2020, for the allocation of the Bigeye tuna (BET) fishing opportunities in the Atlantic, Spain classified vessels in 6 groups. One of them is "the artisanal fleet of the Canary Island" to which 2.9% of the national quota was allocated according to the Regulation (EC) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 recommending Member States to give preferential access to small-scale, artisanal and coastal fishing. Furthermore, article 6 of ICCAT Recommendation 19-02 calls to give a special attention to the needs and specificities of small-scale artisanal fishers.

For the allocation of *Thunnus thynnus* (BTF) Spain classified vessels in 8 groups from which three are belonging to artisanal fleets as for example traps, the artisanal fleets of Mediterranean and Strait of Gibraltar to which a specific quota was allocated based on historical catches. In this case, the economic dependence of the artisanal fleet to BTF fishery was also considered during allocation of fishing opportunities.

Profitability

A specific allocation of quota is given to Southern hake or Southern monkfish to fleets using specific gears (e.g. gillnets) and are fully dependent on these species.

Number of crew (period 2014 to 2018) was considered for the allocation of Bigeye tuna (BET) in the Atlantic and in SWO (period 2015 and 2016). In the national waters, 10 % of mackerel quota was allocated on the basis of the number of crew members for purse seines and 25% for southern hake in the case of gillnetters.

Employment

In the allocation of Bigeye tuna (BET) in the Atlantic, 10% of the allocation is assigned considering employment elements from 2014 to 2018. For swordfish (SWO), in the quota allocated (96.3%) a 15% is allocated based on the crew members embarked between July and September 2015 and 2016.

For mackerel in national waters, 10% of the allocation is based on the number of people on board for purse seiners and 25% for southern hake for gillnetters.

Historical catch records

This criterion is showing fleets, coastal communities and harbours dependency to some stocks on economic and social levels. Allocation based on this criterion should have as reference period a minimum 5 years of the latest period. In national waters, a period of 10 years (2002-2011) was used because it was considered as representative of the previous fishing activities and economic dependency among the different segments of vessels.

Transparency

Interested parties were consulted before the finalisation of fishing opportunities allocations process. The process is embedded in the law and is documented and published online in dedicated pages or websites. The general public can access. The questions related to the outcome of fishing opportunities were not answered. And no information was given concerning the accessibility to outcomes.

Finland

Finland did not use Article 17 for its allocation of fishing opportunities, because since 2017 it applies TFC (Transferable Fishing Concessions) for the allocation of its fishing opportunities for herring, sprat and salmon. The fishing opportunities for cod are very limited and are used in small-scale scientific fisheries and for by-catches. Finland's small fishing opportunity for Atlanto-Scandic herring is used for swaps with other Member States. Other fishing opportunities are not allocated to Finland.

France

Fishing opportunities are allocated using environmental criteria, social and economic criteria, and historical track record. Environmental criteria pertain to the use of selective fishing gear for reduced environmental impact, aimed at reduced habitat damage: specific quotas of bluefin tuna are allocated for lines, which are considered to limit the risk of unwanted by-catches. These gears are mostly used by small-scale fisheries, which are also considered to have limited environmental impact. The environmental criteria are weighted at 1%, and are hence related to the social and economic criteria which include support for coastal fisheries/small-scale fisheries, as well as contribution to the local economy. Social and economic criteria are weighted at 3%. The vast majority of quotas are allocated according to historical catch records (2001-2003), which aim to allocate fishing opportunities between producer organisations (through the historical catch records of their members) and fishermen which are not members. The historical criteria are weighted at 96%. The use of historical catches as the initial basis for quota allocation is justified by the fact that they best reflect vessel movements and therefore changes in demand and capacity on the various maritime fronts. However, this allocation is not fixed for the whole year and may be subject to change through exchanges of quotas between POs and non-POs members.

The allocation *process* of fishing opportunities is embedded in the law, documented and published, and accessible by members of the fisheries sector and members of interested parties on request. Interested parties are consulted before the finalisation of the allocations. The general public can also access information about the allocation *outcome*, via the official journal.

Croatia

Historical track records are the only criteria used from Art. 17, because this is "the most objective criteria which recognises the significance of a particular fishery for an individual vessel/license". The awarding of "fishing opportunities" is defined by the Act on marine fisheries. Conditions and criteria for allocation of fishing opportunities are defined in a series of fishery specific by-laws" and published in the Official Gazette.

The allocation *process* of fishing opportunities is embedded in the law, and interested parties are consulted prior to the final allocation. That allocation *outcome* is documented and published; interested parties and the general public may access it via the official journal.

Ireland

In Ireland 50% of quotas are allocated using environmental criteria based on research conducted by BIM, Ireland's seafood development agency, and the North West Waters Member States Group. The Quota Management Advisory Committee (QMAC) has been set up to support and advise on the trials. Quota balancing has also been introduced. This 'balancing adjustment' is made from a future allocation of a fishing opportunity, and is considered to be a conservation measure that aids industry in matching available quota to actual catch to support the effective operation of the landing obligation. Social/economic criteria are used for 30% of the quota allocated. Specifically, in demersal fisheries catch limits generally take account of the length of fishing vessels and large vessels are allocated double that of smaller fishing vessels, whereas for certain pelagic stocks (Mackerel & Herring), a separate fishery with quota allocations has been set aside for smaller inshore vessels. 20% of the allocations, and particularly allocations for certain pelagic fisheries like Mackerel and Herring, primarily allocate quotas to a specific ring-fenced group of vessels which had been identified on the basis of historical catch reports.

The allocation process for Ireland is embedded in law and information regarding the process as well as the outcome of the allocation of quotas is available for all stakeholders including the general public on a dedicated website.

Italy

Italy used article 17 for the allocation of fishing opportunities in 2022. This MS used only a historical track record for the allocation of fishing opportunities considering it to be the most suitable. It is based on the principle of relative stability for a specific fleet segment or fishing vessel if applicable or historical rights as for example for BFT.

Transparency

All interested stakeholders are consulted before the process of allocation of fishing opportunities and it is embedded in the law. It is documented and published and it can be found online (dedicated page) and it is accessible to the general public. "The used *criteria* are reported in the relevant regulatory measures which, in addition to being published in the Official Journal, are also available on the website of the Administration, as well as in public registers of the Harbour Masters Offices». *Outcomes* of the allocation of fishing opportunities are documented and published and can be accessible to all via the official journal and online with a dedicated page:

https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/311

Lithuania

In Lithuania, every year a great part of fishing opportunities is allocated and distributed between national operators under the system of long-term transferable fishing concessions (except fishing in the coastal area). Article 17 is applied since certain criteria are factors for calculation of reference data for those concessions.

Environmental, social and economic as well as historical track records are the criteria considered for the allocation of fishing opportunities. Selective gears and fishing techniques aiming the reduction of environmental impacts and damage on habitats are used. For the reduction of habitat damage the country established a list of gears and criteria for fishing techniques which are part of the law (Order of the Minister of Agriculture). For the Baltic Sea the reference data shall be increased by 5% if at least 50% of the allocated individual fishing opportunities have been used in the last 3 calendar years for fishing with selective fishing gear or for using fishing methods with reduced habitat damage. Contribution to the local economy is the only social and economic criterion considered. List of gears and criteria related to fishing techniques are accessible at:

https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/4c893d809fad11e68987e8320e9a5185?jfwid=96t6t86sw

Transparency

All interested parties are consulted and the process is embedded in the law. The process is documented and published and it is available online with a dedicated web page. It is accessible to the general public. The outcome of allocation of fishing opportunities is also documented and published, available online to the general public

Latvia

Latvia reports environmental, social and historical catches criteria for the allocation of its fishing opportunities. The allocation follows Cabinet Regulations in established procedures for the performance of commercial fishing and granting fishing limits according to the catch quotas allocated to Latvia. The SSF sector is important and is 75% of the fleet, it also uses passive gears. TACs go however to the trawling fleet for herring and sprat. This trawling is selective.

The *process* and the *outcomes* of the allocation are considered transparent by the MS.

Malta

Social criteria are the only criteria from Art. 17 used for allocating fishing opportunities. This pertains to the support for young fishers. Measures supporting young fishers are applied to vessels under 12 metres in Bluefin Tuna TAC quota.

The allocation *process* of fishing opportunities is embedded in the law, documented and published, and accessible by members of the fisheries sector—interested parties are consulted before the finalisation of the allocations. As for the allocation *outcomes*, only members of the fisheries sector can access this information.

Netherlands

The MS answered that as the Netherlands has a system of individual transferable fishing concessions, Article 17 does not apply, neither in the area of transparency or allocation.

Poland

Poland uses historical catches and technical criteria to allocate its fishing opportunities. Historical catches are calculated based on individual owners´ records, while the technical criteria used is the length of the vessel. The MS does not give detailed information in the answers to the questionnaire, but instead refers to the national legislation where it states that the information is given. This legal text is the Regulation of the Minister of Maritime Economy and Inland Navigation of February 15, 2019 on the detailed method of allocation total fishing quotas and additional fishing quotas (Journal of Laws of 2019, item 370, as amended), published in the Journal of Laws.

Transparency is different for the process of allocation and for its outcomes. While the process is accessible to the public through a website and includes some participation, the outcomes of the allocation are only accessible to the fishing associations and PO, both online and offline, the latter upon request.

Portugal

The only criteria for the allocation of quota is historical records (100% of allocation). This is justified by the principle of relative stability and historical rights, taking into account the circumstances of diverse fleets. There are some exceptions to the dominating role of historical rights, like the mackerel fishery, the quotas in autonomous regions or the daily limits in the mainland.

In the transparency criteria, interested parties are consulted before the finalisation of the allocation process. The allocation process is documented and published for the interested parties on request, and the same applies for the *outcome* of the allocation.

Romania

Romania[20] allocates quotas of turbot in the Danube delta using social and historical landings criteria. 10% of the quota is allocated to newcomers and the social criteria is justified also by an allocation that aims to balance the SSF sector with the trawlers. The allocation through historical landings is based on the average of individual turbot catches from the last three years.

Transparency is ensured for the general public in regards to both the allocation *process* and the *outcomes* and both are also accessible online in the webpage www.anpa.ro

Sweden

In Sweden 75% of the quota allocation uses historical catch records as a criterion. Unallocated quotas, or coastal quotas use environmental criteria (20%), as the passive gears used in this category have a lower sea bottom impact as compared to, for example, bottom trawls. In the case of *nephrops*, additional allocations are made of by-catches to

[20] Romania sent two replies to the questionnaire with some degree of consistency.

fishermen who do not reach a certain minimum level through their catch history in order to improve coverage for their by-catches when using selective gear. Pelagic and demersal fisheries have concentration limits on how many quotas can be held at individual levels to avoid quota concentration on a few hands. To support local fisheries communities, and thus as a social (and regional) criterion, Sweden allocates for example fishing opportunities in the pelagic fisheries in the Baltic Sea a certain amount to those fishermen who only fish in the Baltic.

The allocation process for Sweden is embedded in law and information regarding the process is available for all stakeholders including the general public on a dedicated website. The outcome of the allocation process is not available neither online nor offline.

Slovenia

Article 17 is not applicable in Slovenia. In this country the Management Plan for Marine Commercial Fisheries in the waters of the Republic of Slovenia is defining the conditions and the criteria for the practice of fisheries. The Plan is in accordance with the provisions of Article 19 of Council Regulation (EC) No 1967/2006 of 21 December 2006 concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea, from 2021. Fisheries activity may be carried out by vessels holding a fishing licence indicating the fishing gear concerned. The catches and landings are monitored on the basis of fishing logbooks and declaration of landings in accordance with the provisions of Council Regulation (EC) 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of the Common Fisheries Policy.

Transparency

Interested parties are not consulted before the *process* and the process is not embedded in the law. The process is not documented and published and the same is available for the *outcomes*.

4.3 Missing information (TOR 3 b)

4.3.1 Information missing from questionnaire answers

The information missing from the questionnaires was difficult to assess, as has been said in the introduction, because there is a lack of information on the complete pool of information existing (e.g. for all types of fishing opportunities, fleets, species, areas etc.) that can be used as a baseline. In the future, this baseline information, could be included in the NFP. Nevertheless the EWG has highlighted the issues that were clearly missing (see Table 6 below) and provided questions for MS as requested in the text of the TOR (in Table 7). Additionally, EWG 23.17 has concluded that some of the missing information seems to be related to a lack of understanding of what the questionnaire was specifically asking for.

Table 6 Information missing from MS answers to questionnaire

MS	Transparency of criteria	Transparency of allocation	Environmental criteria	Economic criteria	Social criteria	Historical track	Other criteria[21]
Belgium							On technical criteria, complete information is missing, as no information is given of other fleet segments (apart from trawlers) with low environmental impact Answer to question 4 is missing
Bulgaria							Information on the turbot quota is provided, but information on the allocation of the sprat quota is missing
Cyprus	There is a clear process but no indication of stakeholder participation and opinions	No information is published online					

[21] The column "other criteria" also contains general missing information that did not fit into the headings of other columns.

Germany				The allocation of opportunities for the Baltic Sea region is said to be under revision, no indication of direction of revision is given
Denmark	Schemes have different criteria, some of them based on social and economic criteria, some based on historic track records, and some based on environmental criteria, or on a combination of the criteria, but information on how this is done is missing			
Estonia		Criteria are only explained for herring, and not for sprat which is also managed by quota and produces a similar value of landings		

Greece				How are other fishing opportunities such as fishing efforts in management plans allocated is not stated
Spain			Nothing about gender criteria is provided (which could be expected due to the importance for some sectors)	
Finland		No data on environmental criteria provided, according to the MS this is due to allocation through TFC	No data on social criteria provided, according to the MS this is due to allocation through TFC	
France	secondary allocation criteria (how PO and non-PO allocate the quota they receive) is not described in the answers			

Croatia					The concrete statement and description of the allocation criteria are missing from the answers, which refer to the national legislation
Ireland		The process of how environmental criteria are weighted in following trials is not clear			
Italy	Criteria are said to be published in the website of the Adiministration and in public registers of the Harbour Masters Offices but the link are not provided			Why the criteria is used is not explained: answer just says that the criterion has been considered the most suitable to the reality How the allocation takes place is not clear: relative stability is mentioned among fleet segments or vessels, but this is confusing due to the existence of relative stability as EU criterion	

Lithuania			MS states that allocation criteria of transferable fishing concessions are in line with Article 17 and they are clearly defined in national acts but there is no explanation on how the criteria comply
Latvia			How much of the quota goes to fishmeal? When there is a cessation, how are compensations allocated?
Malta	The total sum of percentages should be equal to 100, but equals to 20%		

Netherlands	The MS refers to the secondary allocation criteria when it says that it cannot provide information on allocation, but the primary allocation criteria (how the MS allocates quota to the individual quota holders) is missing
Poland	The concrete statement and description of the allocation criteria are missing from the answers, which refer to the national legislation
Portugal	As the MS has a diversity of systems for specific fisheries and gathering detailed descriptions of them may be cumbersome, it would be relevant to provide a more detailed comparative of all these systems which is missing

Romania		Explanation of why the MS sent two sets of answers to the questionnaire are missing
Sweden	Max individual quotas limits are not clearly explained	
Slovenia		MS states art 17 is not applicable, but does not explain why (tentatively because of lack of use of quota?) Information on the existence (and if possible, allocation) of other types of fishing opportunities is missing

4.3.2 Questions to MS

TOR 3 b requested that the missing information in section 4.3.1 be formulated as questions to Member States. Suggested questions by EWG 23.17 for the MS to clarify/complete the answers to the questionnaire provided are detailed in Table 7 below.

Table 7 Questions to Member States on missing data (TOR 3 b)

MS	Questions for MS
Belgium	MS to provide information on other fleets with lower impact fishing gears that are not trawlers and where the quota could be allocated MS to specify allocation criteria differentiated from management measures MS is asked to answer question 4 of the questionnaire (weight of criteria)
Bulgaria	MS to provide information on the allocation criteria for sprat
Cyprus	MS to explain what is meant by "relevant relative stability for a specific fleet segment or fishing vessel" in question 2.3.2 (it is not clear if it is an allocation method different from historical record, in which case it needs explanation or if it is a principle that has not been explained and is used in the historical catch criterion) MS to explain how the criterion of historical catch records functions in practice MS to provide the missing weblinks
Germany	MS is kindly asked to give some information on potential future allocation criteria which could also serve other MS
Denmark	MS to provide information on fishing opportunities where more than one criteria is used, how and why
Estonia	MS to complete the information for all fishing opportunities (at least those defined as quota)
Greece	MS to provide information (on allocation) of other types of fishing opportunities in case quotas are not relevant
Spain	MS is kindly requested to provide information on any possible gender criteria in its allocation process MS to clarify the method used to assess the percentages given by the MS
Finland	MS to provide information (species, quantity, duration, beneficiaries etc.) on the primary allocation of the fishing opportunities from the MS to the users of the TFC systems
France	MS to kindly explain if the MS sets any conditions for secondary allocation (e.g. how PO can distribute quota to their members or how it can be exchanged among PO-non-PO members or among different non PO members) MS kindly asked to inform which species, fleet and geographical area is concerned by the allocation of quota in the case when PO can decide to allocate the entire quota of some species to those getting the "best market value for their catches" so as to sustain the local economy and fleets more dependent on these species, because this valuable example can be transferred to other areas or MS

Croatia	MS to provide direct information in the answers (not only reference to national legal texts)
Ireland	MS to provide information on how environmental criteria are weighed after trials
Italy	MS to provide the reasons (e.g. economic, social...) for the choice of the historical criteria. MS to clarify what is meant by "relative stability" as national allocation criterion MS to provide the missing weblinks
Lithuania	MS to provide information on allocation criteria chosen and their functioning in its answers to the questionnaire (not just references to national legislation)
Latvia	MS to specify how much of the quota is allocated to fishmeal MS to specify how are compensations allocated when there is a cessation MS to explain if the NGO that take part of the allocation process are part of the decision- making process
Malta	MS to revise the percentages provided for the distribution of allocation criteria or else provide an explanation of the provided percentages (the total is inferior to one hundred per cent)
Netherlands	MS to provide information (species, duration of rights, beneficiaries etc.) on the primary allocation of the fishing allocation from the MS to the users of the ITQ system
Poland	MS to provide complete, direct information in the answers (not only reference to national legal texts)
Portugal	MS to provide information of representativeness of the fishing opportunities described in the questionnaire (e.g. in relation to the total fishing opportunities of the MS)
Romania	MS to clarify why two questionnaires were sent (e.g. next time the questionnaire is sent, this type of issues could be clarified in the last question "additional comments")
Sweden	MS to provide information on limits to maximum quota
Slovenia	MS to clarify concrete reasons why art 17 is not applicable, e.g. because of lack of use of quota MS to provide Information on the existence (and if possible, allocation) of other types of fishing opportunities (e.g. effort)

4.4 **Synoptic overview (TOR 3 c)**

In order to provide a synoptic overview of the answers provided by MS to the questionnaire on allocation criteria, the EWG 23.17 decided to produce a synoptic table, an summary of MS based on each of the different types of criteria, two brief applications of the allocation criteria types to selected MS/fleet segment grouping that share a common type of allocation criteria and a figure summarising the approximate distribution of criteria by country. The tables presented below (Tables 8 and 9) follows the format chosen at the EWG 22.14 for consistency and comparability, with just two modifications. These

modifications are that the issues on transparency have been expanded (while maintaining the order of columns), and an extra column at the end has been added to provide a weblink to the allocation information if made available by the MS[22]. 'The table in EWG 22.14 has thus been divided into two tables for ease of reading, the first table covering the transparency aspects (Table 4.3) and the second one the description of the criteria, including additional comments and the weblinks to access the information.

4.4.1 Summary of answers per Member State

[22] Please note that this information may only be available in the MS official language(s).

Table 8 Transparency aspects in the implementation of article 17 per MS according to answers to the 2023 questionnaire (format from the EWG 22.14 extended, see main text above)

MS	Transparency of allocation process	Transparency of criteria of allocation			Transparency of final allocation outcome				
		yes /no	for whom	how	yes / no	of what		for whom	how
						in primary allocation (to PO, fishing organisations etc..-EWG 20 14)	in secondary allocation (to fishing families, business, EWG 20 14)		
Belgium		yes	fishing sector (POs)	offline and online via the official journal	yes			General public and POs get access to the outcomes	offline and online via the official journal
Bulgaria	participatory process	yes	general public	law	yes			all, even the public if demanded	upon demand (for the public)
Cyprus		yes	fisheries sector only (incl fisheries associations)	offline by written (or email) request	yes			only for fisheries organisation	only offline, by written (or email) request

Germany	interested parties are consulted before the finalisation of the allocation process	yes		embedded in the law	no				
Denmark	interested parties consulted before the finalization of the allocations	yes	general public	law, documented and public	no	almost every demersal, pelagic and industrial quota, as well as for mussels allocated in the period 2003-2010 for most of the quotas. historic fishery of the individual vessels in the preceding three years before the TFC's were allocated.		for almost every demersal, pelagic and industrial quota, as well as for mussels	in the period 2003-2010 for most of the quota
Estonia	interested parties are consulted before the finalisation of the allocation process	yes	general public	website	yes			general public	website
Greece		n.a [23]							

[23] Greece states that it did not use Article 17, because they do not allocate quota to individual vessels - see additional comments in Table 9).

Spain	All interested parties consulted before the finalization of the allocations of fishing opportunities	yes	general public	First in the official journal, then on a dedicated website	yes		
Finland		n.a.[24]			yes		
France		yes	accessible by Members of the fisheries sector and members of interested parties on request	embedded in the law, documented and published		general public	official journal
Croatia	interested parties are consulted previously to the final allocation	yes	general public	embedded in the law, published in the Official Gazette			
Ireland	interested parties are consulted before the finalisation of the allocation process	yes	general public	website	yes	general public	website

[24] Finland states that it did not use Article 17, because since 2017 it applies TFCs for the allocation of its fishing opportunities, see additional comments in Table 9).

Italy	interested parties consulted before the finalization of the allocations	yes	general public	embedded in the law, documented and published offline and online via the official journal and a dedicated page or website as well as in public registries of the Harbour Masters Offices. and publication in the official journal.	yes		general public	
Lithuania	all parties can consult the process before decision. allocation process of fishing opportunities documented and published	yes	general public	dedicated page or website	yes		general public	all information can be found online, via a dedicated page or website

Latvia	Interested parties are consulted and the rules are set up by law. MS describes the possibility of discussing some principles of allocation in a particular year with some stakeholder representatives, with the allocation decision taken by the Fisheries Advisory Council (chaired by the Minister for Agriculture)	yes	general public		yes		Members of the fisheries sector (Pos and fisheries organisarions) and interested parties on request	offline
Malta	interested parties consulted before the finalization of the allocations	yes	accessible by Members of the fisheries sector	embedded in the law, documented and published	yes		Members of the fisheries sector only	
Netherlands		n.a.[25]						
Poland	interested parties are consulted before the finalisation of the allocation process	yes	general public		yes			written in the law.

[25] Netherlands states that it has a system of individual transferable fishing concessions, and therefore Article 17 does not apply- see additional comments.

Portugal	Interested parties are consulted before the finalisation of the allocation process.	yes	for the interested parties	documented and published on reques, offline	yes		for the interested parties	documented and published on request
Romania	Interested parties are consulted before the finalisation of the allocation process.	yes	general public	on line via a dedicated portal	no			
Sweden	yes	yes			no			
Slovenia	no	no	no	no	no		no	no

Table 9 Transparency aspects in the implementation of article 17 per MS according to answers to the 2023 questionnaire (format from the EWG 22.14 extended, see main text above)

MS	Environmental criteria	Economic criteria	Social criteria	Historical Tracks	Other criteria	Additional comments	weblink to information	
							on allocation process	on outcome of allocation
Belgium	MS describes measures to increase selectivity and decrease fuel consumption							
Bulgaria	yes habitat	employment	Support for young fishers, Support for coastal fisheries/small-scale fisheries, Vessels employing young crew have more points to access to fisheing opportunities	Use of historical tracks as a recognizing the traditional fishing of communities. The calculation of historical tracks is based on the level of utilization of the individual quota for turbot in the period 2015 - 2019 is taken into account. The higher level of utilization is assessed higher, and for low level of utilization of the individual quota (below 50% in 2018 and 2019) points are reduced.	Technical criteria, legal criteria: compliance and historical licensing system. compliance: The absence of participation in IUU fishing is taken into account for all fleet segments for turbot fishing. According to the eligibility criteria applied, no individual quota for turbot may be allocated if points have been awarded for infringements within the meaning of Regulation (EC) № 1005/2008 .			

Cyprus	No		No	Yes, the MS believes that this is thefairest criteria to be used. The catches of the last 5 years are used along with the ICCAT limitations		
Germany	No	Yes. Unused quota needs to be communicated; if more than 5% of unused quota at the end of the year and not returned to the agency in time, that will be deducted in the following year.	Yes. Support for newcomers by allocating freed quotas. Extra quota reserves freed from permanent cessation may be allocated to SSF in Baltic fisheries	Yes, relative stability is an overarching principle and fundamental criteria, based on data from the 1980s. The history of compliance is also taken into account.	Yes, mainly history of compliance	mentioned in section 4, this is very difficult to answer in the suggested format. As mentioned above, we have

Denmark	Yes: Selective fishing gear for reduced environmental impact, aimed at reduced habitat damage	No	Yes, Support for young fishers, Support for newcomers , Support for coastal fisheries/small-scale fisheries.	Yes, a system of transferable fishing concessions (TFC's) for almost every demersal, pelagic and industrial quota, as well as for mussels. These were allocated in the period 2003-2010 for most of the quotas. The criteria used were mainly based on the historic fishery of the individual vessels in the preceding three years before the TFC's were allocated..		The weight of each allocation criteria is difficult to describe because there are different schemes with different criteria (for different fleets etc; sometimes criteria are combined) and their weight may also change due to changes in quota size. The result would also be affected by the way the weight of each criteria is measured, e.g. weight of catches vs value. (more information is also provided in previous questionnaires, 2016,2020,2022)

Estonia		Yes but it is not based on a fixed period in the past but instead on the three years immediately before the new allocation of rights (it seems more like a mechanism to secure tenure of rights than a historical track criteria)	Yes: compliance (or lack thereof). In the two years after a sanction enters into force the fishing opportunities acquired for the same water body are reduced by 10% The length of the vessel is also considered for the allocation	Regulation of the Minister of Maritime Economy and Inland Navigation of February 15, 2019 on the detailed method of allocation total fishing quotas and additional fishing quotas (Journal of Laws of 2019, item 370, as amended) contains the details of the quota allocation.	https://eelnoud.valitsus.ee/main#7GSfoDnz
Greece				MS states that the (few) available fishing opportunities are not allocated individually to fishing vessels.	

Spain	Selective fishing gear are used to reduce environmental impacts and to habitats. Then specific areas fished are used to reduce environmental impact. Conservation: For tuna purse seiners, targeting bigeye tuna (BET) temporary closures coincide with the season of high persistence of juneviles in the area. By 5% of the quota of Bigeye tuna in the Atlantic is allocated to vessels with less impact on juveniles. Quota obtained through SWAPS are	Profitability: A specific allocation quota is granted to fleets using specific gear (gillnetters) and fully dependant of these species as Southern hake or Southern monkfish fleets. Employment: the allocation of Bigeye tuna (BET) in the Atlantic, by 10% of the allocation is assigned by taking into account employment elements from 2014 to 2018. In SWO, in the quota allocated (96,3%) a	Support for coastal fisheries/small-scale fisheries. In 2020, the allocation of the Bigeye tuna (BET) in Atlantic is considering 6 vessels groups, among with is "the artisanal fleet for Canary Island" to which was allocated by 2,9328% of the national quota according to the Regulation (EC) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 asking Member States to provide preferential access to small-scale, artisanal and coastal fishing. The article 6 of ICCAT Recommendation 19-02 calls for special consideration to	Since it is the criteria that clearly reflects the dependency at economic and social levels of the stocks from the different fleets, ports and coastal communities. The legal criteria concerning the history of compliance are taken into account for the allocation of fishing opportunities. First of all due to the art 17 of the CFP. According to the article 27.3 of the Law 3/2001 (repealed by Law 5/2023) allocation criteria are the following: a) The historically developed fishing activity, estimated in volume of catches, fishing effort, time or presence in area, in each case. b) Its technical characteristics. c) The other parameters of the vessel, as well as other fishing opportunities available to it, which optimize the activity of the fleet as a whole. This allocation must be	Explanatory note for tuna and high migratory allocations in Spain: • BET 2020: Historical, dependence on the fishery (economic-social), environmental. 94% of the possibilities are distributed like this: 85% for the historicity between 2014-2018. 15% due to dependence on the bigeye tuna fishery in each fleet group. 5% for environmental criteria, increasing the quota of fisheries with less impact on juveniles. 1% for environmental and social criteria, increasing the quota to the list of small-scale vessels in the Canary Islands. • YFT 2021: Historical, technical and socioeconomic criteria. 99% of the yellowfin quota for purse seiners 70% based on the historicity of the period 2012-2016. 30% proportionally to the tonnage of the vessels expressed in GT, which incorporates both	In 2023 the new Spanish Law 5/2023 on Sustainable Fisheries and Fisheries Research has been approved, including different criteria for the allocation of fishing opportunities that, according to the MS, go beyibd Article 17 of the CFP. Specifically, the following criteria are foreseen in art. 5: a)fishing historly in terms of volume of catches, fishing effort, time or presence in the area c) The impact of the fishing activity [...]l, according to best scientific knowledge available, (d) Other fishing opportunities allocated to the vessel that optimise the activity of the fleet as a whol (e) The employment opportunities and the quality of the employment,	https://www.mapa.gob.es/es/pesca/participacion-publica/default.Aspx

benefited by fleets having increased the selectivity of their gears. As for example artisanal fleet using selective hooks to target mackerel.	15% is allocated based on the crew members embarked between July and September 2015 and 2016. In mackerel for national waters 10% of number of people on board was taken into account in the case of purse seiners, 25% for southern hake in the case of gillnetters. Economical aspects of artisanal fleet depending of the Thunnus thynnus (BTF)	be given to the needs and specificities of small-scale artisanal fishermen. In the allocation of the Thunnus thynnus (BFT), Spain classified its vessels in 8 groups from which the three are belonging to the artisanal fleet with an specified quota allocated to them, specifically to traps, artisanal fleet of the Mediterranean and artisanal fleet of the Strait of Gibraltar attending to the regulation that was in force in Spain and considering the historical data for catches of the artisanal fleet.	representative of the current reality. It means we shall consider that this reference period of years, in some cases a minimum of 5 years is enough, considering that this reference period must be as recent as possible. In national waters, a period of 10 years (2002-2011) was used, as it was considered as enough representative of the previous fishing activities and economic dependency among the different segments of vessels.	technical and socioeconomic criteria. 1% for overruns and longlines	provided by the vessel owner

	fishery was taken into account.			
Finland			MS plans to apply its TFC system further, and, after a revision in 2023 will apply with a ten year's notice of a possible ending of the system. MS considers that the TFC system has allowed for a better planning of fishing activities and a consolidation within the industry. The revision ensures sufficient and common quotas for small-scale vessels. Such quotas are not divided by fishing company/vessel.	

France	Selective fishing gear for reduced environmental impact, aimed at Reduced habitat damage Specific quotas of red tuna are allocated for lines, which are considered to limit the risk of unwanted by-catches. These gears are mostly used by small-scale fisheries, which are also considered to have limited environmental impact. (Weighted at 1%)	Yes, contribution to the local economy.(Social and economic criteria weighted at 3%)	Yes, Support for coastal fisheries/small-scale fisheries. Social and economic criteria eighted at 3%,	Yes, The vast majority of quotas in France are allocated according to reference catch records (2001-2003), which aim to allocate fishing opportunities between producers organisations (through the historical catch records of their members) and fishermen which are not member. The use of historical catches as the initial basis for quota allocation is justified by the fact that they best reflect vessel movements and therefore changes in demand and capacity on the various maritime fronts. However, this allocation is not fixed for the whole year and may be subject to change through exchanges of quotas between POs and non-POs members.	Article R.921-61 of the Rural and Maritime Fishing Code requires the yearly submission of management plans from the PO for the majority of quotas and vessels. These plans define collective or non-collective measures adapted to the specific characteristics of each coast and fleet

Croatia	No	No	NO	Yes. This is "the most objective criteria which recognises the significance of a particular fishery for an individual vessel/license"; "awarding fishing opportunities is defined by the Act on marine fisheries. Conditions and criteria for allocation of fishing opportunities are defined in a series of fishery specific by-laws"	No

Ireland	Yes: Selective fishing gear for reduced environmental impact (i.e. more recently the settin ephrops fishery and setting conditions for gear used in this fishery that are additional to measures adopted at EU level Conservation of fish stocks through quota balancing and fishery closures. Quota balancing aims at better matching quota to catches, where a national advisory committee does monthly to quarterly recommendtio ns on catch	Yes: Contributio n to the local economy and community : In demersal fisheries catch limits generally take account of the length of fishing vessels with large vessels being allocated double that of smaller fishing vessels; the market situation for fish; and in certain fisheries the allocation takes into account the type of fishing gear deployed.	Yes: upport for coastal fisheries/small-scale fisheries: For certain pelagic stocks (Mackerel & Herring) , a separate fishery with quota allocations has been set aside for smaller inshore vessels. For Mackerel hook & Line Fishery a fishing quota allocation of 400 tonnes has been allocated for smaller vessels, which is largely pursued by the inshore fleet including under 12 meter vessels, For herring in 6A South a fishing quota allocation of 350 tonnes has been allocated for smaller vessels, which is largely pursued by the inshore fleet	In pelagic fisheries, allocations take account of historic activity for the relevant fleet segment. Within these allocations, it has regard for the length of fishing vessels and or the historic fishing pattern of the vessels in the segment. The main objective of this approach is to ensure economic viability of the fisheries and to protect against overexploitation of these stocks. In certain pelagic fisheries like mackerel and herring a percentage of the available quota in that fishery is allocated to a specific ring-fenced group of vessels which had been identified on the basis of historical catch reports. The remaining quota allocation is then made available to other vessels to pursue that fishery.	based on historic track records, and some are based on environmental criteria, or on a combination of the	https://www.gov.ie/en/collection/4703a-policy-quota-management/	id.

	limits, to support the implementation of the LO	Support to local fisheries communities: quota is a public resource and is managed to ensure that property rights are not granted to individual operators.	including under 12 meter vessels,			
Italy				The MS informs that they take into account the relevant relative stability for a specific fleet segment or fishing vessel if applicable or historical rights (for BFT)	December 2013 that Member States should strive to provide preferential access to small-scale, artisanal and coastal fishing	

Lithuania	Selective fishing gear for reduced environmental impact, Fishing techniques for reduced environmental impact, selective gears to reduced habitat damage. The list of gears and criteria for fishing techniques are approved by the Order of the Minister of Agriculture.	needs and specificities of small-scale artisanal fishermen.	contribution to the local economy	needs and specificities of small-scale artisanal fishermen.	Major part of the fishing opportunities allocated to Lithuania every year are distributed to the national operators under the system of long-term transferable fishing concessions (except fishing in the coastal area). The allocation system of the transferable fishing concessions is set up in the main national legal act for fisheries – in the Law on Fisheries. The detailed rules of the implementation of that system and descriptions of related procedures, including formulas for calculation of transferable fishing concessions, are specified in relevant acts for the Baltic Sea fleet and the distant fleet.	At national level: Law on Fisheries https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.104591/asr for Baltic Sea fleet: https://www.e-tar.lt/portal/lt/legalAct/ab1180209b3d11e69ad4c8713b612d0f/asr - for distant fleet: https://www.e-tar.lt/portal/lt/legalAct/dfa86a70bacc11e688d0ed775a2e782a/asr	https://zuv.lt

Latvia	Yes There are specific gear limits to avoid damaging stocks in the coastal waters, based on recommendations of the Scientific Institute for Food Safety, Animal Health and the Environment "BIOR" (BIOR)		Yes. Latvian Fishery Law sets apart a specific part of Latvia's fishing opportunities for this fishing segment. The opportunities allocation is decentralised to local government, and is combined with specific gear measures for the coastal fisheries (see environmental measures)	yes the MS states that the reason is to support stability of the economic activity (investments) and is performed proportionally to fishing quotas It is applied to fisheries beyond coastal waters	compliance records of the leasing agreements and fisheries rules		www.likumi.lv www.zm.gov.lv
Malta	No	No	Yes, Support for young fishers, vessels under 12 metres in BFT tac quota	No			
Netherlands	No	No	No	No	As the Netherlands has a system of individual transferable fishing concessions, Article 17 does not apply.		

Poland				According to the fishing sector (in relation to reduction of fishing quotas) the Minister responsible for fisheries, when determining the method of dividing the catch quotas, takes into account the historical fishing base of individual fishing vessel owners and the overall length of the fishing vessels.	When allocating fishing quotas, the criterion of the length of fishing vessels is taken into account.	Regulation of the Minister of Maritime Economy and Inland Navigation of February 15, 2019 on the detailed method of allocation total fishing quotas and additional fishing quotas (Journal of Laws of 2019, item 370, as amended) contains the details of criteria	https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20190000370	https://ers.cmr.gov.pl/ERS/login.jsp
Portugal	No	No	No	Yes. Principle of relative stability and historical rights, taking into account the circumstances of diverse fleet and looking back for a period of three years		The MS has different allocation systems depending on the species.Sardine does not follow the historical criteria , while hake and Norway lobster do; in the autonomous regions there are quotas for species and islands and in the mainland daily limits and the size of the vessels and therefore the number of crew members are also be used.		

Romania	yes, rate 5, selective fishing gears and fishing techniques with low EI for reduce habita damage	yes, profitability account that the economy of the artisanal fleet was very dependant of the bluefin tuna fishery.	yes, 10% for newcomers in the SSF in turbot, the allocation tries to balance SSF and trawlers Social criteria refer especially to the area of disadvantaged local communities from the Danube Delta, SSF fleet segment and turbot fishery SSF and newcomers are considered (with 300 kg of turbot for fishing vessels below 12 m and 500 kg of turbot for newcomers with the fishing vessels 12 m overall)	Yes, last 3 years of records.	Allocation can be correlated with compliance,(Journal of Laws of 2019, item 370, as amended).	https://www.anpa.ro/wp-content/uploads/2022/02/word-Metodologie-calcan-2022.pdf

Sweden	Yes: Fishing techniques for reduced environmental impact. Unallocated quotas are reserved for small-scale coastal fisheries fishing with passive gears (and a few small-trawlers in the pelagic fishery). Additionally, additional allocations are made of by-catches to fishermen fishing for nephrops who do not reach a certain minimum level through their catch history in order to improve coverage for their by-catches when using selective gear.	Contribution to the local economy: The allocation systems (in pelagic and demersal fishery) have concentration limits	Supporting newcomers: Every newcomer in the demersal system receives a certain amount of different annual fishing opportunities for free from the Agency. To support coastal fisheries/small-scale fisheries: unallocated quotas are reserved for small-scale coastal fisheries fishing with passive gears. fisheries communities: The systems considers social (and regional) criterions through so-called regional fishing opportunities (i.e. in the pelagic fisheries in the Baltic Sea a certain	Yes: previous fishing activities during a certain reference period (Ref period for demersal fisheries is 2011-14 and for pelagic fisheries 2002-2004)		To fish with individual fishing opportunities, a fishing permit is required. Those who do not have individual fishing opportunities can fish on so-called coastal quotas. Coastal quotas consist of a quantity per quota where the starting point is that the coastal quotas must be large enough so that fishing can take place without catch restrictions. Only small-scale vessels have the right to fish for coastal quotas and they can fish on these quotas without a fishing permit requirement.

	amount of different fishing opportunities are allocated to those fishermen who only fish in the Baltic).		

Sloven ia		Legal criteria: historical licensing systems. Fishing may be carried out by vessels holding a fishing licence indicating the fishing gear concerned and catches and landings shall be monitored on the basis of fishing logbooks submitted and landing declarations (following (EC) 1224/2009 control regulation) For small pelagic fisheries in the Adriatic (GSA 17), the quantities are based on the level of catches exerted in 2014, up to an amount which should not exceed 300 tons. For demersal species in the Adriatic, Slovenian fishing vessels operating with OTB in GSA 17 shall not exceed the fishing effort limit of 3000 days per year.	Given the small size of the Slovenian fishing fleet and the historically low and decreasing catches, the catches of the Slovenian fishing fleet in the last years have remained well below the limits imposed by the reservations (see previous cell "other criteria"

A part from the allocation criteria themselves, the EWG considered it relevant to have an overview on the relative use of the different types of criteria, which are shown in Figure 7 below. The EWG produced an overview of which allocation criteria were used by each MS, the EWG, based on their answers to the question on weighting of allocation criteria for fishing opportunities. This overview is shown in Figure 7 below, where the concrete share of the different criteria in the total allocation is an assessment of the MS itself.

Additionally, four MS answered "no" to the first question of the questionnaire *("For 2022, did you use Article 17 for the allocation of fishing opportunities?"*). The EWG consider that this is due to two reasons. The first one is the specificity of fishing allocation through transferable quotas, which some MS considered outside the implementation of article 17. The second one, that some MS in the Mediterranean that have very few (or no) fishing opportunities under the form of quota, and do not consider to fall under art. 17. The EWG considers that the issue of TFC/ITQ can be better dealt with by separating primary and secondary allocation (see the Table 8), where more information can normally be given on the primary allocation. Regarding the issue of the Mediterranean, this refers to the problem of the definition of fishing opportunities, which is already mentioned in the introduction to this section. The EWG considers it useful to have a broader definition of fishing opportunities in order to be able to better analyse biological, economic and social sustainability of the EU fisheries.

Figure 7 Distribution of the four types of allocation criteria per member state, according to answers to the questionnaire in 2023

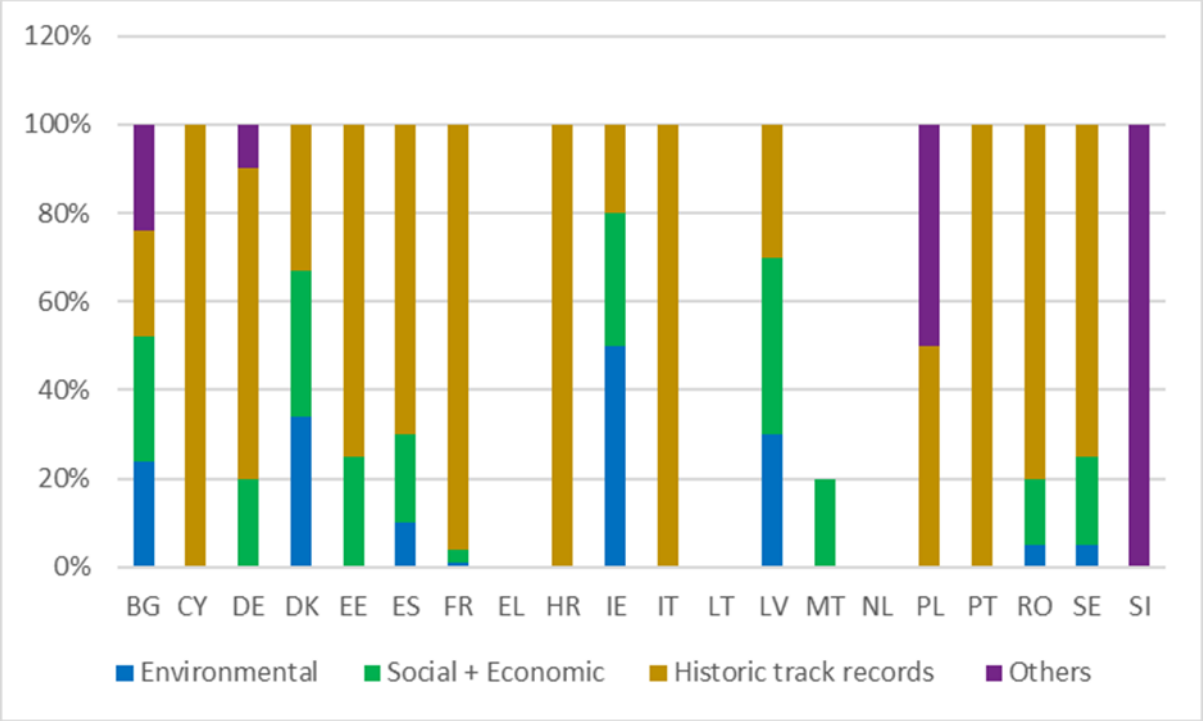


Figure 7 showcases that, though some MS include a variety of types of criteria, the main criterion used by MS for the allocation of fishing opportunities is that of 'historic track records' an outcome that it is described by several MS to be a fair way of allocating fishing opportunities whilst it also creates economic viability and certainty for the fleet. This interpretation may have some limitations

e.g. the catches of small-scale fleets have historically not been recorded in the same systematic way as those of the larger scale fleets, the choice of reference period may introduce bias etc.

4.4.2 Summary of MS answers per type of criteria used

Social and economic criteria

Several MS use social and economic criteria for allocating fishing opportunities. However, from the evidence collected it is not always clear how large is the relevance of these criteria in national fisheries, as usually it is applied in some fisheries, but not in others. In some cases, the coherence in using criteria is not widespread in different fisheries of the same country, like with other Art.17 criteria. For instance, some countries like Spain highlight the case of the allocation of Big eye tuna (BET) to the Canary Islands artisanal fleet (2.9 % of the national quota for a large number of boats). It is relevant to note, however, that in the same year (2020) the fleet of large pole and line tuna boats of the Canary Islands received roughly ten times more quota. Historical catches and dependency of the fishery are in fact the main criteria. It is relevant to note that the criteria of dependence again favours the large scale boats, specialized in this fishery and able to navigate where the schools of BET may be found in a wide area, something the SSF boats cannot do. That results in a high variability in the catches of these species for SSF boats and not for the larger ones. Likewise, there is an allocation for artisanal fishers of the bluefin tuna quota (even though the allocation of more than 200 artisanal boats in the Canary Islands is habitually smaller than the one from a purse seiner in the Mediterranean). In France, in the case of bluefin tuna in the Mediterranean and yellowfin tuna in the Indian Ocean, "a fixed percentage of the initial quota of the large-scale fisheries, calculated on the basis of historical catches, has been transferred to the small-scale fisheries to cover their needs". In Ireland, inshore vessels receive some support for specific fisheries, like the Mackerel hook & Line Fishery, or for Herring in 6A South.

In most cases, the weight of these social or economic criteria, apart from historical catches, is slim. Still, in some countries, like Germany it is supposed to allocate 20% of the fishing opportunities, with support for newcomers and SSF (extra quota reserves freed from permanent cessation may be allocated to SSF in Baltic fisheries).

Some countries, like Bulgaria, employ a diversity of social criteria for assigning fishing opportunities, in this case, for the turbot fishery, favouring young fishers, boats under 10 m and the amount of employment, with a point system. Denmark also uses various measures to favour, within a system of transferable fishing concessions, the support for young fishers buying their first vessel, like the support for newcomers and for coastal fishers (allocation of extra quota of cod, plaice and sole).There is no evidence of other social criteria such as protection of minorities or consideration of gender issues in the provided answers

Sustaining fisheries communities and local economy

Contribution to the local economy is one of the criteria argued in a diversity of countries. For instance, Estonia allocates quota of Baltic herring to ensure that SSCF has stable access to fishing opportunities, having also specific provisions for counties and islands. Negotiation between different stakeholder groups is relevant in some countries, like Estonia, where the quota allocation agreement between the "government, coastal fishery and trawling sector is formalised by Estonian government regulation every year". Similarly, Ireland highlight that "Any movement towards privatisation and concentration of rights into the hands of large companies would seriously risk fishing vessels losing an economic link with Ireland's coastal communities and undermining the socio-economic importance of the fishing industry in the coastal communities dependent on fishing". Consequently, Ireland devises strategies against the concentration of fishing rights, favours the smaller boats in demersal fisheries, in certain fisheries the type of fishing gear, or with a separate quota allocation for certain pelagic species (mackerel hook and line fishery and herring

in 6A). Similarly, Sweden has quota concentration limits, "to avoid that fishing opportunities get concentrated on too few actors", and newcomers in the demersal fishery receives some fishing opportunities. Likewise, the "system pays particular attention to small-scale coastal fisheries fishing with passive gears for which unallocated quotas are reserved", also defining some regional fishing opportunities. Other countries like Latvia consider coastal fishing socially sensitive and important for the coastal areas, and the fisheries law guarantees a specific part of the fishing opportunities to this segment, while the local governments manage and allocate the fishing gear limits, taking into account scientific advice. In Romania the system also takes into account the local economy, supporting newcomers and coastal-SSF, besides profitability. These allocations refer especially to the area of disadvantaged local communities from the Danube Delta and the turbot fishery.

Historical track records

Most MS use historical track records of catches as the principal allocation mechanism. Even those who state that ITQs or TFCs are nowadays their main or unique allocation strategy, have used that criterion for the initial allocation of the quotas at the beginning of the system, decades ago. This mechanism is ingrained into the principle of relative stability, which is deep-rooted in the fisheries policy of the EU since its inception. Institutional inertia, as we have argued before, having this principle embedded in the European and MS regulations, has made it difficult for the criteria from Art. 17 to expand faster. Some countries, like Italy, state that this is the main criteria for allocating fishing opportunities, without exceptions. Otherwise, countries like Portugal may state that the only criteria for the allocation of fishing opportunities are the historical track records, but at the same time, suggest a number of exceptions where other considerations linked more closely to Art. 17 are taken into account. This is a good example of how the implementation of profound changes in criteria may take long to be implemented.

Environmental criteria

Countries use the improvement in the selectivity of the gears (trawlers) as one environmental criterion, such as for example the example of Ireland in the *Nephrops* fishery and increasing selectivity through the setting of minimum mesh size. Ireland also extends the closure of a fishery following the advice of the QAMC. Only Belgium reported energy consumption as a criterion with the specific case of vessel´s motor efficiency. The low environmental impact of passive fishing gears used by small-scale fisheries was reported as a criterion in France (tuna for small-scale fishers using long-line), Latvia and Sweden. In some of these MS (i.e. Latvia and Sweden), fishing in the coastal area is kept for the smaller-scale, lower impact fleet. While improvements in the selectivity of fishing gears is mentioned, none of the countries that uses historical catches as a criterion refers to the negative impacts of trawling in terms of habitat destruction. This impact is not considered as an allocation criterion in general.

Transparency

There is certainly more detailed information regarding transparency of the allocation process and the transparency of the actual allocation through the use of the questionnaire which was revised during EWG22-14. According to some countries, the allocation process is embedded in the law and thus it is possible for all interested parties to understand the process (such as for example Germany, Denmark, France, Croatia and Ireland). A few countries stated that the allocation process (and sometimes outcome) is accessible through a dedicated website though for some of the cases, the website provided is not working. Access and language issues, which are important aspects of an effective transparency, have not been detailed by any MS.

Overview of allocation for EU fishing opportunities for one TAC among different countries and fleets

The EWG subgroup identified some cases where there were relevant implications of differences in allocation systems for the same stock among different MS and also for different fleet segments inside one MS. This differences in impact could be useful to have an overview of how allocation takes place in the EU beyond MES particularities and identify novel practices in transparency and objectivity of the allocation, as demanded by art.17.

The case of different allocation of the same stock among different fleets (Canary Islands BET, Malta Mahi Mahi and Sweden herring) and missing info to obtain representativeness. One case the EWG looked at was the BFT in the Mediterranean.

Assessing the implementation of Article 17 appears difficult for Mediterranean EU Member States who are unfamiliar with the concept of allocating fishing opportunities. Some of them interpret it as the allocation of individual quotas, particularly in the eastern Mediterranean where the limitation on the number of days at sea is unknown. For example, Greece simply states that available fishing opportunities are not allocated to individual vessels. In addition, no reference is made to how the bluefin tuna quota is allocated between fleets. One possibility would be that the Greek authorities did not deem it necessary to mention the fact that these quotas are allocated exclusively to vessels using low-impact gear. Malta states that 20% of fishing opportunities have been allocated on the basis of social criteria, without explaining what this means in practice, and without providing any information on the allocation of the remaining 80%. Other sources indicate that for this country, social criteria is synonymous to young fishers of small-scale fleets. Based on Article 17, Malta has allocating the additional quota to young fishers of the small-scale segment. Cyprus, another country with a large fleet of small vessels, uses historical catch records to allocate bluefin tuna quotas, but has not considered it important to specify the type of vessels benefiting.

Responses from countries with a higher bluefin tuna quota, such as France, Spain and Italy, indicate that the main criterion used for allocation is historical track records. In France, however, there have been a number of changes to this criterion. Responses to the questionnaire indicate that a fixed percentage of the large-scale fleet's historical quota is allocated to small-scale fisheries. The aim of this allocation was to satisfy "their needs", but no explanation is given as to what this meant in practice. Nor do the answers mention how fishing quotas are allocated to meet the needs of the artisanal fishing fleet. Answers to other questions indicate that the allocation of bluefin tuna to the small-scale fleet (gillnetters and longliners) meets the environmental criteria of article 17, considering that they have less impact on the environment and they reduce damage to habitats. In Italy, the allocation of bluefin tuna fishing opportunities is based on historical track records, as this criterion is considered the most appropriate for preserving the social cohesion of the industry and the communities that depend on this species. Spain also applies the principle of historical track records, but the fleet targeting bluefin tuna is divided into eight groups, three of which belong to artisanal fishing from which only trap fishing is mentioned (the other two artisanal fleets are unknown). The track record criterion is seen as a means of satisfying the needs of coastal communities and fleets dependent on this species by guaranteeing employment.

The examples of Croatia and Slovenia illustrate how they have allocated fishing opportunities in general. The answers do not refer to bluefin tuna. Croatia also uses track records as a criterion for allocating fishing opportunities, which can be days at sea or catches. Fishing opportunities are allocated to vessels that meet the various conditions and criteria laid down by law. A list of vessels with access to fishing opportunities is published. No reference is given to the type of vessels or species but, according to the answer, all information can be found in the country's Maritime Fisheries Act. Slovenian fishing opportunities are defined in the Annex IV of the Council Regulation (EU) 2023/195 of 30 January 2023 fixing the fishing opportunities for certain stock and groups of stocks applicable in Mediterranean and Black sea. In this country, fishing opportunities mean limiting catches and days at sea. Thus, quota allocation for small pelagic fisheries in the Adriatic (GSA 17) is based on historical track records (reference year: 2014), and for demersal species, the effort of the Slovenian fleet operating with demersal trawls (OTB) in the GSA 17 area is limited to 3,000 days per year.

The main message for Mediterranean countries is the need to clarify the concept of fishing opportunities, and to ask national authorities to illustrate their comments with concrete examples, so that different situations can be better understood.

4.5 Practices with positive impact or novel practices

According to ToR 3d, EWG 23.17 prepared a list of selected practices based on the online survey transmitted to Member States. The EWG followed the text in ToR 3d and understood best practices as practices with positive impact, and, as suggested in the TOR text, in the cases where best practices could not be identified, a list of novel practices (understood as practices that differ from traditional practices) was considered. It is important to acknowledge and take into consideration that the practices presented below are extracted from the responses of the MS without cross-examination on their actual implementation and their positive or negative impacts. However, also because there is information on the existence of conflicts with other stakeholders on the allocation performed by some MS, which show the existence of at least different views on impacts, it is not possible to indicate whether the allocation has a positive impact, and therefore the expression novel practice has been preferred. The approach chosen by the EWG is therefore to select practices which appear to have positive potential to achieve the objectives of Art 17.

The creation of advisory committees, to support and advise the competent authorities on the allocation of quotas according to different criteria can be seen as a positive example in terms of transparency and engaging stakeholders. Such an example is the Quota Management Advisory Committee in Ireland. Ireland has created this body, which advises the Government on gear trials, with the aim of improving the environmental performance of fishing gears, incentivising this through quota allocations. To promote the allocation of quota through incentives is also an objective of art. 17.

Again with respect to transparency, both communication and participation strategies are present in the answers, from which other MS could take advantage in the design of their allocation processes. To support the local economy and sustain fishers' livelihoods, French authorities decided to regionalise some of the national quotas for non PO-fishers after a consultation of relevant fisher organisations. This decision applies to the sole, hake and mackerel quotas. The idea behind such a decision is to slow down the race to fish, allowing for a better spread of catches around the year and ultimately a better control of the risk of overfishing.

Considering social criteria in general, Different countries (Spain, Italy, Croatia, Bulgaria…) mention support to *fishing communities* as one of the social criteria justifying the allocation of fishing opportunities. Even if the term "community" is not very well defined, (e.g. geographical area or group of fishers), the objective is to reserve access to species or fishing ground to communities depending on them to maintain employment. The satisfaction of social criteria is often used as an argument to reduce the scope of relative stability principle and historical track records principles.

A concrete social novel practice is to promote employment on board through prioritising boats with a larger crew: in Spain it seems that in some areas days at sea are allocated according to the number of crew on board. Another set of non-traditional practices when choosing allocation criteria is that of MS keeping a percentage of quotas for some specific *social groups*, as newcomers in fishing (i.e. in Romania, Bulgaria, Malta), young fishers (Denmark, Bulgaria, Malta) or for SSCF fishers (i.e. in Latvia, Bulgaria and Malta). These types of support take different forms, as for example Denmark supports young fishers through aid for buying a vessel while Bulgaria supports vessels with young crews and Malta provides as much as 20% of its blue fin tuna to young fishers with smaller boars. Giving more quota to vessels employing people with contracts in a context of frequent informal work is also a novel practice that has appeared during the scrutiny of the questionnaire answers (e.g. Bulgaria).

Good practices related to economic criteria are less common, and are often mixed with other types of criteria such as social or environmental. A particular example is that of France, with quotas under PO management. PO can decide to allocate the entire quota of some species to those getting the "best market value for their catches" so as to sustain the local economy and fleets more dependent on these species.

A set of novel environmental criteria is applied by some MS. Denmark´s environmental criteria pertain to the use of *selective* fishing gear for reduced environmental impact, aimed e.g. at *reduced habitat damage* or *improvement of fish stocks*. As an example, Ireland considered the selectivity of its *nephrops* fishery in its allocation. Another example, France pertain to the use of selective fishing gear for reduced environmental impact: specific quotas of red tuna are allocated for lines, which are considered to limit the risk of unwanted by-catches. These gears are mostly used by small-scale fisheries, which are also considered to have limited environmental impact. Additionally, the criterion related to the social and economic criteria which include support for coastal fisheries/small-scale fisheries, as well as contribution to the local economy. However, the relevance of this environmental criteria seems to be limited, as the environmental criteria are weighted at 1%, social and economic criteria at 3% and the vast majority of quotas are allocated according to historical catch records. In the Atlantic area, Spain dedicates 5% of the quota of bigeye tuna to vessels having less impact on juveniles. In other cases, fleets that increased the selectivity of their gears are entitled to use additional quotas obtained through swaps. It is the case of artisanal vessels targeting mainly mackerel with selective hooks.

Other examples of novel practices under the environmental group of criteria include the consideration of *energy consumption* (Belgium) and of the *avoidance of marine mammals and birds*. Belgian reported the influence of fuel efficiency of engines, especially after the economic crisis. Bulgaria for example considers the reduction of by-catches of mammals and birds in its allocation. An incentive-based approach is implemented to encourage the use of active acoustic devices to repel cetaceans. The presence of such devices and their greater number is giving vessels a higher number of points in the procedure of allocation of fishing opportunities.

Regarding other criteria, some MS have established the rule that less quotas are allocated to fleets that did not have satisfactory compliance with regulations or had penalties over the previous year(s) (e.g. Estonia, Bulgaria). Estonia foresees that more than with one penalty for serious violations of fishing requirements in the same water body, water area or county, the fishing opportunities will be reduced by 10% for the two years following the last penalty. Bulgaria states that in a case of IUU fishing or infringements vessels cannot access fishing individual quota for turbot and in the case that the vessel licence is revoked vessels cannot access individual quota.

Finally, it seemed positive to the EWG to consider the complete mix of types of allocation criteria (environmental, social and economic) when allocating the fishing opportunities. Ireland appears to be a good example where 20% of the allocation is done based on historical track records, 50% based on environmental criteria and 30% based on socio-economic criteria. This is particularly relevant as in many cases the same criterion can be considered under different types, e.g. historical catches.

References

Allison, E. H., & Ellis, F. (2001). The livelihoods approach and management of small-scale fisheries. Marine policy, 25(5), 377-388.

Amundsen, Helene (2015): Place attachment as a driver of adaptation in coastal communities in Northern Norway. In: Local Environment 20 (3), S. 257–276. DOI: 10.1080/13549839.2013.838751.

Anderson, J. L., Anderson, C. M., Chu, J., Meredith, J., Asche, F., Sylvia, G., … Valderrama, D. (2015). The Fishery Performance Indicators: A Management Tool for Triple Bottom Line Outcomes. PLOS ONE, 10(5), e0122809. doi:10.1371/journal.pone.0122809

Ballesteros, Hugo and G. Rodríguez-Rodríguez. 2018. ""Acceptable" and "Unacceptable" Poachers: Lessons in Managing Poaching from the Galician Shellfish Sector." Marine Policy 87:104–10. https://doi.org/10.1016/j.marpol.2017.10.015

Barbier, E. B. (2012). Progress and challenges in valuing coastal and marine ecosystem services. Review of Environmental Economics and Policy, 6(1), 1-19.

Bodin, Ö., and Crona, B. I. (2009). The role of social networks in natural resource governance: What relational patterns make a difference? Global Environmental Change, 19(3), 366-374.

Brandth, B., & Overrein, G. (2013). Resourcing children in a changing rural context: fathering and farm succession in two generations of farmers. Sociologia Ruralis, 53(1), 95-111.

Braun, Marjan (2022): Biographical perspectives of small-scale Baltic fishers to understand social-ecological transformations. Leuphana Universität, Lüneburg.

Brown, Katrina; Westaway, Elizabeth (2011): Agency, Capacity, and Resilience to Environmental Change: Lessons from Human Development, Well-Being, and Disasters. In: Annu. Rev. Environ. Resour. 36 (1), S. 321–342. DOI: 10.1146/annurev-environ-052610-092905.

Clay, Patricia M. and Lisa L. Colburn. 2020. A Practitioner's Handbook for Fisheries Social Impact Assessment. NOAA Tech. Memo. NMFS-F/SPO-212, 80 p. http://spo.nmfs.noaa.gov/tech-memos/

Coopmans, I., Dessein, J., Accatino, F., Antonioli, F., Bertolozzi-Caredio, D., Gavrilescu, C., ... & Wauters, E. (2021). Understanding farm generational renewal and its influencing factors in Europe. Journal of Rural Studies, 86, 398-409.

Eliasen, S. Q., Papadopoulou, K. N., Vassilopoulou, V., & Catchpole, T. L. (2014) Socio-economic and institutional incentives influencing fishers' behaviour in relation to fishing practices and discard, *ICES Journal of Marine Science*, Volume 71, Issue 5, July/August 2014, Pages 1298–1307, https://doi.org/10.1093/icesjms/fst120

Etiegni, C. A., E. Ostrovsky, J. Leentvaar, and F. Eizinga. 2011. Mitigation of Illegal Fishing Activities: Enhancing Compliance with Fisheries Regulation in Lake Victoria (Kenya). Regional Environmental Change 11(2):323–334. https://doi.org/10.1007/s10113-010-0134-4

European Commision. (2011). Commission staff working document. On EU indicators in the field of youth. European Commission. https://ec.europa.eu/assets/eac/youth/library/publications/indicator-dashboard_en.pdf

European Commission. Joint Research Centre. & European Commission. Scientific, Technical and Economic Committee for Fisheries. (2020). The 2020 annual economic report on the EU fishing fleet (STECF 20-06). Publications Office. https://data.europa.eu/doi/10.2760/500525

European guide for risk prevention in small fishing vessels (https://osha.europa.eu/en/legislation/guidelines/european-guide-risk-prevention-small-fishing-vessels, 19.10.2023.)

European Parliament, M. (2021). REPORT on Fishers for the future: Attracting a new generation of workers to the fishing industry and generating employment in coastal communities | A9-0230/2021 | European Parliament. https://www.europarl.europa.eu/doceo/document/A-9-2021-0230_EN.html

Fabinyi, M., Barclay, K., Fabinyi, M., & Barclay, K. (2022). Fishing Livelihoods and Wellbeing. Asia-Pacific Fishing Livelihoods, 91-109.

Garcia, S. M., & Charles, A. T. (2008). Fishery systems and linkages: from clockworks to soft watches. *ICES Journal of Marine Science*, 65(6), 797-806

Gopal, N., Hapke, H. M., Kusakabe, K., Rajaratnam, S., & Williams, M. J. (2020). Expanding the horizons for women in fisheries and aquaculture. *Gender, Technology and Development*, *24*(1), 1-9. https://doi.org/10.1080/09718524.2020.1736353Lebedef, E. A., & Chambers, C. (2023). Youth and newcomers in Icelandic fisheries: Opportunities and obstacles. *Maritime Studies*, *22*(3), 34. https://doi.org/10.1007/s40152-023-00326-0

Hegland, T.J., Ounanian, K. and Raakjær, J., 2010. Surveying Stakeholders on the Intended Outcomes and Models of Regionalisation. In J. Raakjær, H. Abreu, C. Armstrong, T. J. Hegland, L. V. Hof, K. Ounanian, M. P. R. P., C. Röckmann, S. Zetterholm (Eds.), Exploring the Option of Regionalising the Common Fisheries Policy: Work Package 4 Technical Document (2 ed., pp. 84-120).

Holland, D. S., Abbott, J. K., & Norman, K. E. (2020). Fishing to live or living to fish: Job satisfaction and identity of west coast fishermen. Ambio, 49(2), 628–639. https://doi.org/10.1007/s13280-019-01206-w

Holm, P. (2012). Oceans past: management insights from the history of marine animal populations. Earthscan.

Instituto Social de la Marina (2021), Informe Anual 2021. Ministerio de Inclusión, Seguridad Social y Migraciones. Madrid.

Jepson, Michael; Colburn, Lisa L. (2012): Development of Social Indicators of Fishing Community Vulnerability and Resilience in the U.S. Southeast and Northeast Regions. U.S. Dept. of Commerce (NOAA Technical Memorandum NMFS-F/SPO-129).

Keane, A., Jones, J.P., Edwards-Jones, G. and Milner-Gulland, E.J., 2008. The sleeping policeman: understanding issues of enforcement and compliance in conservation. Animal conservation, 11(2), pp.75-82. https://doi.org/10.1111/j.1469-1795.2008.00170.x

Kraan, M. L., Steins, N. A., Verschuur, X., van der Valk, O., van Wonderen, D., Puister-Jansen, L., Klok, A., & Deetman, B. (2023). Sociale en culturele waarde van visserij voor de visserijgemeenschap en gevolgen van beleidswijzigingen. (Rapport / Wageningen Economic Research; No. 2023-053). Wageningen Economic Research. https://doi.org/10.18174/629835

Laura Leite, Cristina Pita, (2016) Review of participatory fisheries management arrangements in the European Union, Marine Policy, Volume 74, Pages 268-278, ISSN 0308-597X, https://doi.org/10.1016/j.marpol.2016.08.003.

Lebedef, E. A., & Chambers, C. (2023). Youth and newcomers in Icelandic fisheries: opportunities and obstacles. Maritime Studies, 22(3), 34.

Lozano, A. J. G., Sparks, J. L. D., Durgana, D. P., Farthing, C. M., Fitzpatrick, J., Krough-Poulsen, B., ... & Kittinger, J. N. (2022). Decent work in fisheries: Current trends and key considerations for future research and policy. Marine Policy, 136, 104922.

Manlosa, Aisa O. (2022): Operationalizing agency in livelihoods research: smallholder farming livelihoods in southwest Ethiopia. In: E&S 27 (1). DOI: 10.5751/ES-12887-270111.

Marshall, Nadine A.; Marshall, Paul A. (2007): Conceptualizing and Operationalizing Social Resilience within Commercial Fisheries in Northern Australia. In: E&S 12 (1). DOI: 10.5751/ES-01940-120101.

McGregor, A., Coulthard, S., & Camfield, L. A. (2015). Measuring what matters: The role of well-being methods in development policy and practice. Development Progress Project Note 04. London: Overseas Development Institute.

Nainggolan, Mai Fernando, D. R. Nugraha, and Arjon Turnip. 2020. Empowering of Young Farmer for Arabica Coffee Farming Business in Simalungun. Iop Conference Series: Earth and Environmental Science 466: 012034.

Nielsen, J.R., 2003. An analytical framework for studying compliance and legitimacy in fisheries management. Marine policy, 27(5), pp.425-432. https://doi.org/10.1016/S0308-597X(03)00022-8

Ostrom E. A general framework for analyzing sustainability of social-ecological systems. Science. 2009 Jul 24; 325(5939):419-22.

Pálsson, G. (1994). Coastal economies, cultural accounts: human ecology and Icelandic discourse. Manchester University Press.

Pollnac, R. B., S. Abbott-Jamieson, C. Smith, M. L. Miller, P. M. Clay, and B. Oles. (2006[2008]) Toward a Model for Fisheries Social Impact Assessment, Marine Fisheries Review 68:1-18.

Power, N. G., Norman, M. E., & Dupré, K. (2014). "The fishery went away" The impacts of long-term fishery closures on young people's experience and perception of fisheries employment in Newfoundland coastal communities. Ecology and Society, 19(3).

Scientific, Technical and Economic Committee for Fisheries (STECF) –Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-76-09514-9, doi:10.2760/638363, JRC117517

Starc, N. (1992). 'ISLANDS, REGIONS AND DEVELOPMENT POLICY', Društvena istraživanja, 1(1 (1)), 115-126. https://hrcak.srce.hr/32585 (20.10.2023.)

Steins, Nathalie A.; Mattens, Alessa L.; Kraan, Marloes (2023): Being able is not necessarily being willing: governance implications of social, policy, and science-related factors influencing uptake of selective gear. In: ICES J Mar Sci, Artikel fsac016. DOI: 10.1093/icesjms/fsac016.

Stephenson, R. L., Paul, S., Wiber, M., Angel, E., Benson, A. J., Charles, A., ... & Sumaila, U. R. (2018). Evaluating and implementing social–ecological systems: a comprehensive approach to sustainable fisheries. Fish and Fisheries, 19(5), 853-873. https://doi.org/10.1111/faf.12296

Stiglitz, J. E., Fitoussi, J.-P., & Durand, M. (2018). Beyond GDP: Measuring what counts for economic and social performance. OECD Publishing. https://doi.org/10.1787/9789264307292-en

Symes, D., & Phillipson, J. (2009). Whatever became of social objectives in fisheries policy? Fisheries Research, 95(1), 1-12.

van Dijk, Tara (2011): Livelihoods, capitals and livelihood trajectories. In: Progress in Development Studies 11 (2), S. 101–117. DOI: 10.1177/146499341001100202.

Voyer, Michelle & Barclay, Kate & Mcilgorm, Alistair & Mazur, Nicole. (2017). Using a well-being approach to develop a framework for an integrated socioeconomic evaluation of professional fishing. Fish and Fisheries. 00. 1-16. 10.1111/faf.12229.

White, C. S. (2015). Getting into Fishing: Recruitment and Social Resilience in North Norfolk's 'Cromer Crab' Fishery, UK. Sociologia Ruralis, 55(3), 291-308. https://doi.org/10.1111/soru.12101

Żmija, K., Fortes, A., Tia, M. N., Šūmane, S., Ayambila, S. N., Żmija, D., ... & Sutherland, L. A. (2020). Small farming and generational renewal in the context of food security challenges. Global Food Security, 26, 100412.

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List of electronic annexes documents:

EWG-23-17 – Annex 1 - Proposal of a new National Fisheries Profile template
EWG-23-17 – Annex 2 – Article 7 Types of conservation measures
EWG-23-17 – Annex 3 - Variables, indicators and sources

ANNEXES

Annex 1 Proposal for a new National Fisheries Profile template

The NFP template (see table x below) provides the general structure the profiles should take. Given that MS fisheries are heterogeneous with significant differences in terms of fleets, size, history, and social and governance aspects of fisheries (e.g., Malta vs. the Netherlands), the amount of sub-headings should be tailored towards each specific MS case. MS-specific unique aspects not anticipated by the template should be added rather than overlooked. Non-relevant sub-headings should simply be left out. Given the necessary emphasis on the social aspects to complement, for example, the AER, time should be fully allocated for a thorough analysis of the "Social, cultural and economic aspects of fisheries" and "Governance system" sections. Additionally, given that it will take time for NFPs to develop and fully mature, time for reflection on the process should be allocated and prioritized.

In addition to the executive summary, infographics could be useful as complementary, explanatory visuals. These are necessary not for summarizing quantitative data per se, but for highlighting key social messages and aspects (e.g. Spain case: fishing communities are dying).

Table A.1 Table Structure National Profile

Chapter	Subheading
A. Background to the fisheries profile	
B. Executive Summary	Main findings
	General description of the society
	Fisheries sector structure
	Governance system
	Social, cultural and economic aspects of fisheries
C. Methods and data	
1. General description of the society	
2. Fisheries sector - structure	2.1. General overview
	2.2. Summary of fleets
	2.3. Geographic areas
	2.4. Fishing practices/systems
	2.5. Processing, trade and markets
	2.6. Fishing communities
3. Governance system	3.1. Responsible authorities
	3.2. Common Fisheries Policy
	3.3. Management instruments
	3.4. Producers Organizations
	3.5. Other national organizations
	3.6. Relevant stakeholder groups

	3.7. Fisheries innovation
	3.8. Marine Spatial Planning
	3.9. Fighting IUU fishing
	3.10. Landing Obligation
	3.11. Government support to fisheries
4. Social, cultural and economic aspects of fisheries	4.1. Fisheries in the national societal context
	4.2. Markets and trade
	4.3. Employment
	4.4. Social Security systems
	4.5. Education and Training
5. Current trends, issues and developments	5.1. Societal trends
	5.2. Trends
	5.3. Constraints
	5.4. Opportunities
6. References	
7. Additional information	

GUIDELINES TO SUPPORT THE NATIONAL FISHERIES PROFILE

General layout and drafting principles

The goal of the NFP is to provide a comprehensive overview of the fisheries sector, emphasizing the social dimension and ensuring that the best available science is used in informing decision-making and societal dialogues.

In writing the NFP based on the template, keep the main headings as presented and use the subheadings to provide main descriptions and data. Please, tailor that to the relevance of the topic to the given country. If the topic is relevant, explain it fully. If it is not, state the rationale for not developing it completely.

The NFP uses the terms social and economic instead of socio-economic to reflect the equal relevance of the two dimensions.

While this guideline indicates potential sources of information, these are not an exhaustive list.

1. General sections

A. Background to the fisheries profile: summary of the previous developments on the NFP as an analytical tool. Below is an example, adapted from the Danish NFP, to be updated as appropriate.

> *National profiles would "contribute to a better understanding of the fisheries management context of each individual country and would facilitate proper social analyses in the future" (Delaney, 2020). A national profile has previously been produced for the Netherlands and based on that*

STECF EWG 22-14 recommended several adjustments and that further the Spanish and Danish national profiles were produced to get closer to a clear picture of what the national profiles should look like (STECF, 2023).

Following the template, this report is structured with an executive summary: main findings of the profile; description of the society; fisheries sector structure; governance system; and the social, cultural and economic aspects of fisheries. This is followed by a brief presentation of methods and data, after which the more detailed sections that the executive summary builds directly on are presented.

B. Executive summary:

- Main findings refer to the conclusions of the analysis including trends, constraints, opportunities and other issues deemed relevant.

C. Methods and data: synoptic description of main sources. Following is an example from the Spanish NFP:

This national profile combines primary, secondary sources and expert knowledge.

- *Main data sources:*
- *Official fisheries data from the Spanish Ministry of Agriculture, Fisheries and Food (MAPA)*
- *Economic and social data from the fisheries sector collected under the EU Data Collection Framework*
- *General data from the Spanish Institute of Statistics (INE)*
- *Import and export data from Eurostat and EUMOFA*

- *Main secondary sources include*
- *STECF reports on the economic and social aspects*
- *ICES ecosystem and fisheries overviews*
- *GFMC stock assessment reports*
- *Scientific publications*
- Grey literature

Experts consulted and other additional sources as well as acknowledgements can be included here.

2. NFP sections

1. General description of the society: Sources: national statistics agency, scholarly articles, etc. Level of analysis: national, regional and NUTs 3.

2. Fisheries sector – structure: description of the relevant fleet segments, geographical areas in which they operate, fishing practices, processing, trade and markets, and fishing communities. By completing this section, it will provide an understanding of the defining features of the sector. Note that the chapter on *Governance system* deals with actors (fishers' organizations), structures and processes (e.g. consultative bodies).

2.1. General overview

2.2. Summary of all fleets: marine commercial (SSF, LSF, DFW; include detail on foreign flagged), recreational (including if, applicable, foreign vessels travelling to the MS areas), and subsistence. The analysis can group fleet segments according to criteria that are appropriate for the specific Member States (e.g. commercial together, SSF together, etc.). Whenever the fleet segmentation used for the Data Collection Framework does not capture relevant dynamic within the fleets,

please describe them (e.g. SSF definition less than 12 m length and passive gear). By doing so, the definition provided in the NFP complements the one in the DCF and supports comprehensive understanding of the fleets structure and dynamics.

In the Member States where recreational and subsistence fisheries are significant in terms of figures or specific interactions with the commercial fleet, it should be described fully.

After providing a general summary, additional subheadings are recommended to cover the main groupings of the fleet (e.g. 2.1.1 Pelagic Fleet or 2.1.1. SSF).

The section should include the most recent year's data available: number of vessels; crew; turnover (million Euros), which harbours are important; catch stock profile and target species, weight and value. Most recent trend available, ideally using large time series (e.g. 2000-2020).

Sources: AER, national sources as complementary (if applicable); harbours from National data.

2.3. Geographic areas: the scope is limited to the marine national EEZ. If applicable, other waterways relevant for the Member State under analysis will be added (e.g. inland waters).

This section describes the main features of the fishing grounds, summarizing descriptions available at ICES, GCFM, FAO, national sources, etc. The main resources in these areas are listed and the stock status assessed by the main advisory bodies summarized.

In addition, the main landing ports, vessels and auctions are described. This description should be connected to section 2.6 *Fishing communities*.

Sources: ICES, GFCM, FAO, JRC, National Fleet register, Wikipedia, others.

2.4 Fishing practices/systems: this section aims to gain understanding of fishing behaviour and fishing strategies at métier level or within métiers (if available). Ideally the section will present métiers used in national science and advisory processes and compare them to the ones used for the DCF (if those match perfectly, it is enough to summarize them in a table). It should also include métier analysis available in the literature or grey literature and point out knowledge gaps.

The section needs to cover also traditional fishing techniques (in use, or formerly used), addressing their socio-cultural value.

Sources: DCF, literature, reports, expert knowledge.

2.5 Processing, trade and markets: under this section there are four subsections.

2.5.1. Processing industry and trade: the analysis here aims to summarize qualitative data and provide the main figures and links to the STECF Processing industry report.

2.5.2. Fish sales and auctions: summarize the first sale of seafood products, sale system and implications for the price formation. Specifically, how this affects fisher's capacity to determine the price at which to sell their catch and influence the cost of the seafood. If the regulatory framework sets specific requirements for landing (see section 3. Governance system), please refer to them here.

The type and number of sale markets is described as well as any particular features relevant for the development of the activity.

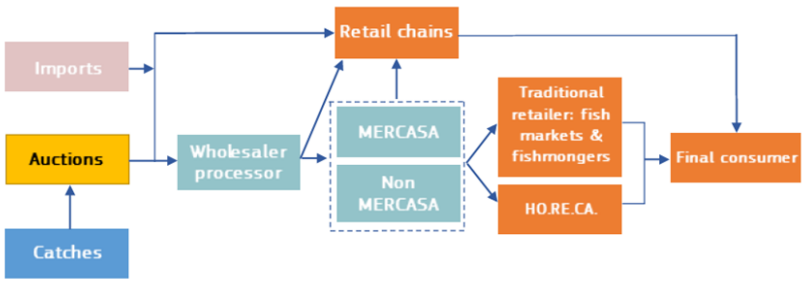
A diagram of the value chains is helpful to understand its functioning (example for the Spanish NFP). Also, provide a description and figures on how much of the landings are processed, into what and by whom, and connect to how much is exported and where in section 2.5.4.

2.5.3. Seafood consumption: main trends aiming for the largest series possible (2000-2020). Quantitative and qualitative approaches combined to highlight main drivers and factors explaining trends.

2.5.4. Production and trade in the global market: the main approach here is to explain market flows, countries and products relevant to the Member state, including main figures. Note that under section 4.2 there is a subheading dealing with markets and trade oriented to address specific issues (e.g. gender, working conditions, etc.) so they may be interlinking worth pointing out.

Sources: Processing industry report STECF, national reports, national data, EUMOFA, EUROSTAT, literature.

Figure 14. The supply chain of fisheries products in Spain



Source: IDES, University of Cantabria adapted from EUMOFA, 2023

2.6. Fishing communities: the definition of fishing communities should be stated (place-based community, community of practices, present significance, community-based lifestyle fishing, etc.), including the rationale of that selection.

The link between communities and harbours (see also sections 2.2. and 2.3) should be analysed. The trends in the numbers and status of fishing communities are detailed. How changes in the number of vessels, crews, landings, captures, etc. described elsewhere affect a given community helps understanding their vulnerability/resilience. Other changes at community/social level impacting the communities should be explicitly addressed (e.g. size of the family, employment alternatives in the area, etc.).

The level of analysis is linked to the definition of community. Analysis at local, supralocal or NUTs 3 are considered pertinent, the latter being useful for comparison at EU level.

The section also includes the analysis of the ancillary industry. Quantitative and qualitative approach to describe the connections between the catching sector, through the value chain and upwards and downwards other economic sectors.

Sources: literature, national statistical institutes, reports, expert knowledge, EU report on ancillary industry.

3. Governance system

The section provides a general overview of the institutions, structures and processes of the governance system, indicating defining features (e.g. top-down, bottom-up, decentralized). That analysis frames the subheadings. Please consider the ones relevant at International level (e.g. RFMOs), EU level (including ACs), National, regional, local.

3.1. Responsible authorities

3.2. Common Fisheries Policy. A short paragraph referring to the CFP, followed by how the policy have affected and is affecting fisheries in the Member State, highlighting major changes and detailing if specific impacts affect a given fishing community or fleet segment.

3.3 Management instruments. Description of the access and entrance system, resource allocation, input and output management, plans, co-management systems or approaches.

A specific subheading should address the access to fisheries, detailing:

- a description of the right system (IQ, ITQs, Q, TURFs, etc.)

- a description of the allocation of quotas and the criteria used (in particular attending to art. 17 CFP)
- a description of any major institutional changes in the access, rights or allocation
- ownership and other specific requirements.

3.4. Producers organizations. Quantitative approach (number, representativeness in terms of fleets, landings, etc.) and qualitative (e.g. insights in rules applicable to a given fishery agreed by the PO and extended to other operators in that same fishery). Please, describe who is not represented under POs (e.g. SSF).

3.5 Other national organizations. If applicable, please detail relevant fisheries organizations other than POs (e.g. cofradías (Spain), Le conseil de prud'hommes (France), cooperatives, associations, etc.)

3.6 Other relevant stakeholder. Description of actors relevant in the fisheries and fishing communities: for instance, NGOs in SSF, Fisheries Local Action groups, etc.

3.7 Fisheries innovation. Description of technological and social innovations relevant to the sector. Advances in the co-production of knowledge, the integration of experienced based knowledge in scientific and advisory processes, science-industry networks, citizen science, etc. should be covered.

3.8 Marine Spatial Planning: description of the main features of the Member State official MSP (or in the preparing phases) according to the MSP Directive. Interactions, priority zoning for fisheries and other features need to be described. If conflict already exist, please provide details.

3.9 Fighting IUU fishing: the section states the relevance of the topic in the Member state, combining quantitative and qualitative approaches.

3.10 Landing obligation: this section prioritizes social and economic impact of the Landing obligation, while describing legal, policy, research and/or technological developments that are a game changer in the implementation of the LO.

3.11 Government support to fisheries. Description of the types of funds and resources allocated to support the fisheries sector, including direct support individuals, companies, organizations and FLAGs. For comparative purposes EMFF and EMFAF indicators and data are preferable, as well as the OECD reports. Support can be local, regional, national and EU level.

Sources: legislation, European Atlas of the Sea, Medtrends, Emodnet, OECD, STECF data and reports, EMFF and EMFAF FAMENET.

4. Social, cultural and economic aspects of fisheries. This is a core section to the NFP and findings from previous sections should be addressed with social lenses.

4.1. Fisheries in the national societal context. This section should cover the role of fisheries in the social-economic context of the Member state as well as the role and perception that fisheries have in society. The latter refers to social legitimacy to operate, awareness and understanding of the activity, fisheries literacy, equality, civic culture and participation in decision making, etc. Level of analysis at NUTs 3 would support comparison and community profiles.

If community profiles are available, summarize here findings related to cultural heritage, well-being, identity and sense of place and other relevant factors. If community profiles are not available, provide insights available from the literature and expert knowledge on these topics.

4.2. Markets and trade. Connected to the issues addressed in point 2.5, the analysis is here complemented here by looking at social aspects (e.g. women doing value-added and branding), working conditions, cultural values, changes in the species traditionally consumed, fishers' strategies to shorten the value chain and reach the consumer, etc.

4.3. Employment (fishing and processing). Quantitative approach to state the main figures of the employment, social structure of the fishers' population, demographic data (age, gender, education, etc.), annual wages in the context of EU Member States and labour productivity. Qualitative approaches to working conditions, mobility, foreign workers, living conditions on-board, social agreements, union representation, etc. Specific attention should be paid to the international agreements signed by the Member state on this topic.

4.4. Social Security system. Description of the main features of the national social security system and, if applicable, specific regime for fishers or maritime workers, organizations, social benefits, coverage of work-related illness, specific measures to deal with gender gaps or equal access.

Number of fishers covered by social security (standard and non-standard employment relations i.e. self-employment). Statutory and voluntary branches (unemployment, sickness, pensions etc.) for fishers. Special rules for fishers, for example early retirement

Reflections on how the system may affect the attractiveness of the job are recommended.

4.5 Education and training. This section indicates if formal training is required to become a fisher, what courses and programmes are available and the topics coverage (e.g. operational, safety, environmental, exotic and invasive species). Specific attention should be paid to the international agreements signed by the Member state on this topic and the reasons for not singing it. If available, provide an assessment of the capacity and/or training system.

The section should indicate if the term "fisher" is legally or officially defined, if it is a recognized profession or not.

Sources: AER, DCF, EUROSTAT, national statistics, literature, national experts.

5. Current Trends, issues and developments. This section discusses the results, using findings from the data, information and analysis included in the previous ones.

5.1 Societal trends: describe how main drivers (trends affecting and continuing to affect in the mid-term e.g. climate change and associated extreme events, shocks and crisis –war, pandemics-, gentrification) impact the Member state society in connection with the fisheries. For instance, value changes (e.g. higher/lower environmental awareness), aging population, changes in seafood consumption, changes in main economic sectors related to seafood and fisheries (e.g. tourism).

5.2. Trends

5.2.1. Resource productivity and efficiency indicators: for the summary, use the balance indicator reports from STECF. Complement quantitative analysis with a qualitative assessment of topics (e.g. Brexit).

5.2.2 National fleet performance: for the reflection on trends, use AER findings and the ones from section 2 and 3 to address how fleet structure and governance system may affect performance (if applicable).

5.2.3 Fishing communities. Building on section 2.6, summarize here major trends (consolidation, declining, growing) and other factors connected to 5.1 and 5.2.1 and 5.2.2.

5.3 Constraints

5.3.1 General challenges- fisheries.

5.3.2 General challenges value chains-trade

5.4 Opportunities
5.4.1 Fisheries
5.4.2 Value-chain and trade
Use sections 5.3 and 5.4 to write the main findings in the Executive Summary.

Sources: AER, STECF, OECD, National sources, expert knowledge.

6. References

7. Additional information

Annex 2 Article 7 Types of conservation measures

1. Measures for the conservation and sustainable exploitation of marine biological resources may include, inter alia, the following:

(a) multiannual plans under Articles 9 and 10;

(b) targets for the conservation and sustainable exploitation of stocks and related measures to minimise the impact of fishing on the marine environment;

(c) measures to adapt the fishing capacity of fishing vessels to available fishing opportunities;

(d) incentives, including those of an economic nature, such as fishing opportunities, to promote fishing methods that contribute to more selective fishing, to the avoidance and reduction, as far as possible, of unwanted catches, and to fishing with low impact on the marine ecosystem and fishery resources;

(e) measures on the fixing and allocation of fishing opportunities;

(f) measures to achieve the objectives of Article 15;

(g) minimum conservation reference sizes;

(h) pilot projects on alternative types of fishing management techniques and on gears that increase selectivity or that minimise the negative impact of fishing activities on the marine environment;

(i) measures necessary for compliance with obligations under Union environmental legislation adopted pursuant to Article 11;

(j) technical measures as referred to in paragraph 2.

2. Technical measures may include, inter alia, the following:

(a) characteristics of fishing gears and rules concerning their use;

(b) specifications on the construction of fishing gear, including:

(i) modifications or additional devices to improve selectivity or to minimise the negative impact on the ecosystem;

(ii) modifications or additional devices to reduce the incidental capture of endangered, threatened and protected species, as well as to reduce other unwanted catches;

(c) limitations or prohibitions on the use of certain fishing gears, and on fishing activities, in certain areas or periods;

(d) requirements for fishing vessels to cease operating in a defined area for a defined minimum period in order to protect temporary aggregations of endangered species, spawning fish, fish below minimum conservation reference size, and other vulnerable marine resources;

(e) specific measures to minimise the negative impact of fishing activities on marine biodiversity and marine ecosystems, including measures to avoid and reduce, as far as possible, unwanted catches.

https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:354:0022:0061:en:PDF

Annex 3 Variables, indicators and sources

quantitative data
qualitative data

			Variables/Indicators	Sources			
1- STATE OF PLAY				**DCF**	**other**	**level**	**Type**
a-	**Working conditions**	**Safety**	Age of vessel	x		Fishers	survey
			Fatality rate		x	Fishers	survey
			Number of injuries at work		x	Fishers	survey
			The time period between last medical exams/certificates		x	Fishers	survey
		Type and number of contracts over a year	Owner (self-employed) and crew, employment full time or part time for c	x		Fishers	survey
			Duration of contract		x	Fishers	survey
			Remuneration scheme		x	Fishers	survey
			Subcontracts vs. direct contracts		x	Fishers	survey
			Retirement		x	Fishers	survey
			Social coverage		x	Fishers	survey
			Signature of ILO convention N° 188		x	MS	survey
			Trade union density rate		x	Fishers	survey
			Existence and types of collective agreements		x	Fleet segment	survey
	Well-being	**Material/Economic**	Financial security (turnover, minimum wage...)	x		Fleet segment	
			Food security		x	Fishers	Interviews
			Access to services		x	Community of place	Interviews
			Environmental quality		x	Community of place	Interviews
			Existence of agreements between owners/crew		x	Fishers	survey
		Subjective well being	Independance		x	Fishers	Interviews
			Freedom		x	Fishers	Interviews
			Emotionnal connection to nature/sea		x	Fishers	Interviews
			People's perceptions of their quality of life		x	Fishers	Interviews
			Values and beliefs that shape their levels of satisfaction		x	Fishers	Interviews
		Relational aspects	Relationships that enable communities to achieve wellbeing		x	Community of place	Interviews
			Volunteering in community activities		x	Community of place	Interviews
			Business and political connections that may benefit communities		x	Community of place	Interviews
	Training and Skill	**Level of education**	Level of school education	x		Fishers	
		vocational training	Number of certificates		x	Fishers	survey
			Qualifications inside and outside of fishing		x	Fishers	survey
			Frequencies of trainings		x	Fishers	survey
	Social position	**Social standing**	Experts or community members to judge the social standing based on a scale		x	Community of place	survey
b-	**Situation compare to other sectors (more dangerous/more difficult)**		See Safety 1-a				
c-	**Awareness of sustainability issu**	**Environmental sustainability issues**	Specific courses relating to these issues		x	Fishers	Interviews
			Level of awareness of the community they live in		x	Fishers	Interviews
			Cooperation with scientific staff (e.g. observers)		x	Fishers	Interviews
			Dealing/perception of environmental sustaibility issues		x	Fishers	Interviews
		Economic sustainability issues	Profitability	x		Fleet segment	
			Investment in new / alternative gear and new technologies.		x	Fleet segment	survey
			Entrepreneurship		x	Fishers	Interviews
			Impact of policy on enterpreneuship		x	Fishers ?	Interviews
		Social sustainability issue	Generative renewal		x	Fishers	Interviews
			Livelihood alternatives		x	Fishers	Interviews
			Food security (small scale fisheries)		x	Fishers	Interviews
			Displacement from fishing grounds		x	Fishers	Interviews
d-	**Working conditions (non-EU workers onboard EU vessels fishing outside EU waters)**	**Working conditions**	See working conditions 1-a				
		Inequalities beetween EU and non EU wor	National structure (multiculturality)		x	Fleet segment	Interviews
			Income		x	Fishers	survey
			Occupational injury frequency rate (fatal and non-fatal)		x	Fleet segment	survey
			Rotation of the crew		x	Fleet segment	survey
			Voluntary agreement from the industries		x	Community of place	survey
		Decent working conditions	Employment in excessive working time		x	Community of place	survey
			Precarious employment rate		x	Community of place	survey
			number of strikes of non-EU workers onboard EU-vessels		x	Community of place	survey

quantitative data
qualitative data

			Variables/Indicators	Sources			
3- DEPENDENCY				**DCF**	**other**	**level**	**Type**
a-	**Vulnerability of fishers**	**Personal disruption**	Percentage unemployed		x	Community of place	survey
			Crime index		x	Community of place	survey
			Percentage with no diploma		x	Community of place	survey
			Percentage in poverty		x	Community of place	survey
			...		x	Community of place	survey
		Population composition	Percentage immigrant population, ,		x	Community of place	survey
			Percentage female single headed households		x	Community of place	survey
			Percentage population 0-5 years		x	Community of place	survey
			...		x	Community of place	survey
		Poverty	Percentage receiving assistance		x	Community of place	survey
			Percentage of families below poverty level		x	Community of place	survey
			Percentage over 65 in poverty		x	Community of place	survey
			Percentage under 18 in poverty		x	Community of place	survey
		Labour force	percentage females employed		x	Community of place	survey
			Percentage population in the labour force		x	Community of place	survey
			Percentage of self-employed workers		x	Community of place	survey
			Percentage populations receiving social security benefits		x	Community of place	survey
		Housing characteristics	median rent in Euros		x	Community of place	survey
			Median mortgage in Euros		x	Community of place	survey
			Median number of rooms		x	Community of place	survey
		Social network (see question 7)	Number of fisheries organizations (any time and legal entity)		x	Community of place	survey
			Number of fisheries Local Action Groups (FLAGs)		x	Community of place	survey
			Percentage of people affiliated/engaged in community groups		x	Community of place	survey
		Support to fishing communities	Percentage of public departments/services focused [only] on fisheries		x	Community of place	survey
			Percentage of NGOs with fisheries programs		x	Community of place	survey
			Percentage of other civic society organizations with fisheries programs		x	Community of place	survey
		Professional mobility potential	Level of education		x	Community of place	survey
			Percentage of companies outside the fisheries sector in the area		x	Community of place	survey
		Public services and facilities	Number of schools		x	Community of place	survey
			Banks, etc.		x	Community of place	survey
			Facilities within a given distance: train, bus, etc		x	Community of place	survey
		Access to resources - Management	TAC (high / low)		x	Fleet segment	survey
			Duration of quota		x	Fleet segment	survey
			Access to fishing grounds		x	Fleet segment	survey
		Access to resources - Technical aspects	Engine power	x		Fleet segment	
			Fuel price	x		Fleet segment	
			Fuel consumption	x		Fleet segment	
		Access to resources - Social aspects	Spatial conflicts with other users		x	Fleet segment	Interviews
			Percentage of potentially accessible areas		x	Community of place	survey
		Access to resources - ecological prerequis	Condition of stock	x		Fleet segment	
			(extreme) Weather conditions (climate change)		x	Community of place	survey
b-	**Adaptability to changes**	**Training and skills**	see 1-a				
		Polyvalence - fishing activites	Skillfulness needed for obtaining fishing business		x	Fishers	Interviews
			Willingness to act polyvalent needs to be taken into account		x	Fishers	Interviews
		Polyvalence - no fishing activites	Different Trainings and skills (see 1-a)				
			Existence of outside jobs which don't need extra training		x	Community of place	survey
		Geographic criteria	Remoteness and marginality of certain area		x	Community of place	Interviews
			Scarcity of natural resources		x	Community of place	Interviews
		Agency (individual capacity to freely make choices)	Preconditions - capital assets and resources		x	Fishers	Interviews
			Processes - social and ecological feedbacks and dynamics in livelihoods		x	Fishers	Interviews
			Power- social and political frames in which livelihoods are embedded		x	Fishers	Interviews
			(Future) possibilities - interactions of preconditions, processes, and power		x	Fishers	Interviews
c and d-	**Impact of employement on non-national fishers (EU or non-EU) on fishing communities**	**Data on nationality**	Rate of unemployment in the community		x	Community of place	survey
			Proportion of non-resident employment		x	Community of place	survey
			Duration of stay		x	Community of place	survey
			marriage between locals and non-locals		x	Community of place	survey
			Perception of integration / racism		x	Community of place	Interviews
			Public discourse on foreigners in community		x	Community of place	Interviews
			Political climate in community		x	Community of place	Interviews
			Change in cityscape/landscape		x	Community of place	Interviews

Annex 4 Suggested considerations to change the Article 17 questionnaire

Given the specificity of the questionnaire, and given the apparent lack of clarity and guidelines around the implementation of Art 17, it can be considered to offer a short webinar (i.e. half a day) for the people who will be called to fill in the questionnaire and to enable alignment of responses as much as possible.

Specific issues that can be considered to change the current questionnaire entail, amongst others:

- More clearly defining what is meant by fishing opportunities and maybe also allocation, and transparency.
- MS allocate fishing opportunities to different fishing stocks and might have different allocation criteria for each of them. The questionnaire as it stands now does not allow for this. Could we have a question specifically asking: What is the percentage allocated to each fleet in your country for each quota species?
- The questionnaire should be adapted for the Mediterranean region were TACs are irrelevant
- The questionnaire asks about socio-economic criteria which does not allow for a distinct analysis of social and economic criteria
- Historical landings are treated as a separate non-socioeconomic criterion when it is economic (which fleet has profited from the fishing opportunity in the past)
- Concerning SSF, a specific question could be added "How do you support SSF in your MS?"

Below the suggestions are presented in the context of the current set of questions:

In 2023, the Council of fisheries ministers of the European Union agreed on 27 fishing opportunities for a value of a value of €3.5 billion (see https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7707). This questionnaire is about the implementation of article 17 of Regulation (EU) No 1380/2013 by EU Member States over the past year.

Article 17 of Regulation (EU) No 1380/2013 states:

"When allocating the fishing opportunities available to them, referred to in article 16, Member States shall use transparent and objective criteria including those of an environmental, social and economic nature. The criteria to be used may include, inter alia, the impact of fishing on the environment, the history of compliance, the contribution to the local economy and historic catch levels. Within the fishing opportunities allocated to them, Member States shall endeavour to provide incentives to fishing vessels deploying selective fishing gear or using fishing techniques with reduced environmental impact, such as reduced energy consumption or habitat damage."

For the purposes of this survey, fishing opportunities are defined as:

1. Which country are you answering for?

2. Did your country receive fishing opportunities from the EU in 202X?

If your answer is no, please move to question X

Yes

No

3. For which fishing stocks and for how many tonnes (or numbers) did your country receive fishing opportunities in 2022?

Fishing stock	Tonnes	Under ITQ (yes or no)

Please add more rows if necessary

4. Which fishing fleets were allocated fishing opportunities in your country in 202X?

For this questionnaire fishing fleets in the EU refers to:

Small-scale fishing fleet or SSCF (definition)

Large scale fishing fleet or LSF (definition)

Distant water fishing fleet or DWF (definition)

Recreational fisheries

	Fishing fleet	Tonnes
Fishing stock:		
	SSCF	
	LSF	
	DWF	
Fishing stock:		
	SSCF	
	LSF	
	DWF	
Fishing stock:		
	SSCF	
	LSF	
	DWF	

Please add more rows if necessary

ALLOCATION CRITERIA

1. In allocating the fishing opportunities among fleets, which of the following criteria did you use?

Fishing stock:

Environmental criteria

The fleet´s selectivity of the fishing gear

The fleet's levels of by-catches (including marine mammals/seabirds/turtles)

The fleet´s energy consumptions (combustible/petrol)

The fleet´s gear impacts on the seafloor

The fleet's historical operation in marine protected areas?

Other criteria (please specify)

Social criteria

The end use of the fleet´s landings (animal feed or human consumption)

The final destination of the fleet´s landings (export markets or local consumption)

The number of fishers employed in the fleet

The importance of the fleet for local employment

The working conditions of the fishers employed in the fleet (good salaries, social security, safety at sea, etc.)

The history of compliance of regulations of the fleet

The number of women working in the fleet or in the processing of the fleet´s landings

The traditional presence of the fleet in the region

The importance of the fleet for local employment

The efficiency of the fleet in terms of value of the landings per fisher

Other criteria (please specify)

Economic criteria

The profitability of the fleet

The fleet that historically used/profited from the fishing stock (known as historical catches)

The level of doubts or financial dependency of the fleet

The efficiency of the fleet in terms of value of the landings per energy consumption

Other criteria (please specify)

Fishing stock: ...

Fishing stock: …

2. Please indicate in percentages the weight of each criteria in the allocation of fishing opportunities as a percentage. The total sum of percentages should be equal to 100.

	Criteria	%
Fishing stock::		
	Environmental	
	Social	
	Economic	
	Historical catches	

Fishing stock::		
	Environmental	
	Social	
	Economic	
	Historical catches	

Please add more rows if necessary

SMALL-SCALE COASTAL FISHERIES

For fishing stocks that can be allocated to SSCF:

The social relevance of small-scale fisheries outweighs its economic contribution and this fishery sector still constitutes the economic motor of many rural coastal communities. Furthermore, small-scale fisheries use mainly low environmental impact fishing gears. Given this relevance in terms of social, economic and environmental criteria, please comment on why this fishery sector received a minimum percentage, if at all, of the quotas in the allocation process of 202X?

TRANSPARENCY

1. Are there written guidelines or procedures documentation for the allocation process?

Fishing stock:

Yes

No

Fishing stock:

Yes

No

Please add more rows if needed.

2. Where are these guidelines or procedures published or available?

Fishing stock:

	Guidelines	Procedures	Other (please specify)
National legislation			
Internal documents			
Web page			
Other (please specify)			

Fishing stock:

	Guidelines	Procedures	Other (please specify)
National legislation			
Internal documents			
Web page			
Other (please specify)			

Please add more tables if needed.

3. Are stakeholders involved in the decision process for the allocation?

Fishing stock:
Yes
No

Fishing stock:

Yes

No

Please add more rows if needed.

4. If yes, which stakeholders were invited to participate in the allocation of quotas to fishing fleets in 202X?

Fishing stock:

National authorities

Local authorities

NGO´s

PO´s

Small-scale fisheries organisations

Women organisations

Other (please specify)

Fishing stock:

National authorities

Local authorities

NGO´s

PO´s

Small-scale fisheries organisations

Women organisations

Other (please specify)

5. If POs participated, please list the name of the POs

Fishing stock:

PO´s:

Fishing stock:

PO's:

6. What is the level of participation of stakeholders during the allocation decision process?

Fishing stock:

Information

Consultation

Deciding together

Stakeholders take the decision

7. Are there mechanisms for conflict resolution in place?

Fishing stock:

Yes (please explain)

No

CONTACT INFORMATION

Please indicate the name of the institution and department of the contact person responsible for the answers in the survey

Please indicate the position of the contact person responsible for the answers in the survey

Please indicate the email of the contact person responsible for the answers in the survey

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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.

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